School Board Journal

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I NEED ENGINEERS, DOCTORS, NURSES, SCIENTISTS SKILLED LABOR OF EVERY KIND
WAR
AND I SHALL NEED THE GREATEST POSSIBLE EFFICIENCY IN THE GROWING GENERATION.
PEACE AFTER WAR
WAR TAXES
SCHOOL BOARD
TO THE SCHOOL BOARDS OF THE UNITED STATES OF AMERICA— "AS A WAR MEASURE MAINTAIN AT FULL CAPACITY THE EFFICIENCY OF THE SCHOOLS IN EVERY DEPARTMENT." THE SCHOOL BOARD JOURNAL
Harold Foster

SCHOOL TERMS MUST NOT BE SHORTENED!

THAT QUESTION OF RANKS—AGAIN

Frank A. Morris, Supervising Agent of the
Connecticut State Board of Education

A certain recipe for cake contains among other things the following, "one cup flour, one pinch salt." If my wife and your wife try to make the same cake, will both results taste the same? I think it is a pretty well known fact that they won't. My wife is a good cook, and so no doubt is yours, but the difference lies in the frailty of human judgment. What is a pinch of salt? Manifestly only luck will make two people get the same amount. What is a cup of flour? If your wife uses a tea cup and mine uses a coffee cup, they are certainly not the same. But if they both use measuring cups made to hold a certain definite amount, the chances of getting equal results are much better. That is, I want to emphasize the fact that to get anything like accurate measurements we must have objective standards,—something to "go by."

A certain school with which I was somewhat connected had a "passing rank" of "seventy." A senior boy was refused the right to graduate because his average of marks for four years was only sixty-nine and three-fourths. What is "seventy?" What is a pinch of salt? By actual test, the best teachers will vary from ten to fifty per cent on their grading of the same paper. If they will vary this much on a paper, which can be studied at leisure, how much more will they vary on a brief oral recitation, one of a large number in a single class period? And yet the variation of only thirty per cent for one week out of the four years would be more than enough to keep that boy back. A slight cold on the part of only one teacher could produce "grouch" enough to make that much variation. Can we balance a year out of a boy's life against that?

Why do we use marks or ranks in school, anyway? Most people will give one of the two following answers: to serve as a basis of promotion, or to let parents know what the child is doing in school. But, does "seventy-five" mean anything in particular to a parent? I doubt if it does. How can it, if it means nothing definite to the one who wrote it? And do we promote people outside of school on daily ranks of their work, or do we promote them on our judgment as to their ability to do the work to which we are promoting them? Because a man is a good steady hod carrier do we make him the architect for our next building? Or do we pick the architect because of his known or assumed ability to put up the kind of a building we want? Why should we be less sensible in our school promotions?

There is a third reason for the use of ranks still given occasionally, that they must be used for figuring honor parts at graduation. However, I believe that this custom is so near obsolete that it is not necessary to take up here the reasons against it.

Then we can conclude that to have a proper and useful ranking system we want something which is objective, that will serve as a basis of promotion, and that will let parents at home know what their children are doing at school.

A system that is now in considerable vogue is one based on the normal probability curve. We know that in a large number of persons we will always find a certain proportion very tall, a larger proportion of medium height, and another smaller group of short people. This is equally true of mental ability, or in fact of anything of a variable nature.

In a group of a thousand pupils, for instance, we could be absolutely certain that one hundred were extremely bright, and one hundred so dull as to be hopeless so far as ability to do acceptable school work is concerned. There would be four hundred of ordinary ability, neither particularly bright nor particularly dull. Then there would be two hundred who were brighter than the four hundred, but not so bright as the one hundred exceptional ones. There would be a corresponding class of two hundred, not so bright as the four hundred, but still not so dull as the hundred dullest.

This gives us an arbitrary classification into five groups. We could rank them A, B, C, D, E, or any other way we pleased. A would mean that the child was one of the ten per cent extra bright pupils. E would mean that a pupil was hopelessly dull. C would mean that a pupil was an ordinary scholar, and so on.

Theoretically this gives us an excellent system but actually it has its faults. It is much more definite than the usual method of teacher's judging, which is a virtue. But it is still difficult to tell whether a child is the poorest in group A or the best in group B. Thus some pupils would probably not get a square deal. However, the greatest fault lies in the theory itself. This theory is true *only for a large number of cases.* The ordinary class is nowhere near large enough to contain a normal distribution. There will be more bright ones or more dull ones, or some other such irregularity, which prevents this method of marking from being at all accurate.

Some day, when scientific measurement of school work has reached greater perfection, we shall be able to grade pupils in a really objective manner, by saying that his work is so much on this scale, and this high on another. But at present we are unable to use this method, because enough "measuring cups" have not been devised.

But if the old method of marking is not satisfactory, and a new and scientific method is not yet possible, what are we actually to do? I say, let's ship the whole business. We wouldn't attempt to figure in terms of thousandths of an inch, if our measurements had been taken with a ten foot pole. So why should we attempt to figure on three-fourths of one per cent, when we can't evaluate within thirty to fifty per cent to start with?

However, for efficient school work, it is necessary that parents have some idea of what their children are doing, and the children ought to know what the teachers think of their work. The really ideal way would be for the teacher to write individual letters to each parent, but this is impractical, due to the great expenditure of time which would be required in composing tactful and judicious statements. Therefore, I propose the following system, which will supply the needed elements without making any pretense to scientific accuracy.

First, it is a recognized fact that there are certain things which a child must know before he can do certain other things. These necessary things should constitute a required minimum,* specified on paper for each year's or term's work. Then, if a child is working just as hard as he can, and shows evidence that he will probably accomplish the minimum in the required time, he is doing all that we can ask of him. Then let us have a little rubber stamp, with the words "*Work Is Satisfactory*" thereon. This could be used in the record book and on the child's report card.

Another child is very bright. He is able to do much more than the minimum. He should be required to do as much as he is able before being marked "*Work Is Satisfactory.*" If he loafs along, doing only as much work as the duller pupil who is striving at top capacity, he should be marked "*Work Is Not Satisfactory*" or "*Able to do Better Work.*" This same mark should be used for any pupil who is not doing his best work, regardless of cause. Some are lazy, some have to stay home to do the washing, some could do much better than the minimum, some could barely reach it, but each should be held to his best effort, and the question of promotion should not enter into the stamping, at that time.

The question of promotion would then be entirely distinct from monthly or other periodical markings. The markings tell parents and pupil what the teacher thinks of the pupil's work. The promotion is based, not on these marks, but on the teacher's estimate of the pupil's ability, or lack of ability, to do the work of the next grade.

There is another child who is doing the best he can, but who shows no probability of reaching even the minimum. For him I would have a third stamp "*Work Is Too Hard.*" This I would use simply as an explanation of his change into other work or lower classes, for it is an abolute sin to allow him to struggle along in a competition which is too strong for him.

With this system there would be no heart burnings because John who is working his head off is only getting a C, while Charles who is bright but a loafer is getting a B. Parents of pupils who are "*Able to do Better Work*" will be apt to want to know the reason why, and slow but deserving pupils will get their just recognition at last.

*This article is, of course, based on a school where there is a *time* promotion, (i. e.) yearly, semi-yearly, or the like.

SCHOOL ADMINISTRATION

William Dick, Secretary School Board of Philadelphia

The purpose and aim of every school board is, or should be, the development of the child, mentally, morally and physically, and so augment the welfare of the community.

The topic, "School Administration," assigned to me, has been a much-mooted question for some time past. Whatever there is of discussion has been, and is, brought about by the school superintendents the country over. At the instance of these worthy officials, whose positions are seats of power and dignity, commissions, survey committees and bodies of men under various titles, have been formed for the purpose of investigating conditions and recommending improvements to the boards of control or boards of education in charge of the fields surveyed.

Since as a rule the majority membership of these commissions is educators, the report in every case is the same, in favor of an absolute control of the school system by the superintendent of schools. Rarely do they suggest lodging any functions in the board of directors except that of electing the school superintendent and confirming his recommendations.

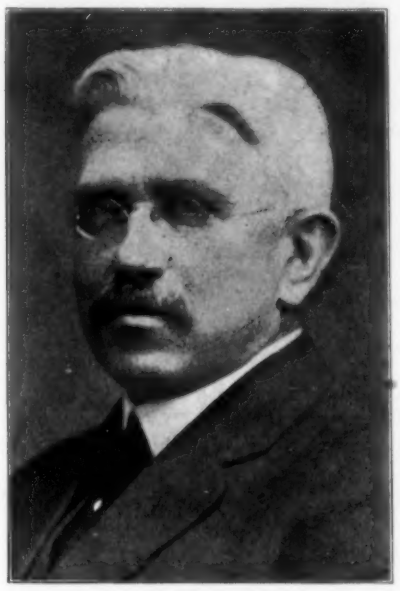
Are these suggestions born of a desire for the real good of the school systems, or simply from presumptuous wish for a non-controlled control centered in a single individual? Are we to have a democracy or an autocracy as the dominant force in a school system? If the world is at war for democracy as against autocracy, then let the war be waged not only as to international relations, but also as to control of all the immediate concerns of free peoples.

There are two phases of prescribed work of school administration—*educational,* the determining of what are proper school functions; and *fiscal,* the raising of revenue and the proper expenditure thereof for those functions.

Since the board of school directors is the body responsible to the people for the proper expenditure of their money, it necessarily follows that the board of school directors should be the body which finally passes upon the question of what shall form a part of the school activities and curricula. A primary duty of such a board is to elect a competent and efficient superintendent of schools. His business is to make to the board of school directors those educational recommendations which, in his judgment, will place the school system upon the highest level attainable for that community. Being a school superintendent, necessarily he is of a professional cast of mind, and so for his own safety he should be at all times willing and glad that his recommendations should come before a body of businessmen and laymen for consideration, and either adopted because they are concededly correct, or modified by him in accordance with the ideas brought out in discussion. With such a method of procedure, there is almost a certainty that the policy so adopted will meet with general approval, since it is the combined judgment of the superintendent of schools and the representatives of the people.

The Board as the Financial Authority.

A man engaged faithfully and earnestly in shaping and administering such work will, in our larger school systems, find ample occupation in keeping himself and his associates profitably employed all of the working hours of the day, and in the smaller school systems he will find that he has just that much more time in which to develop the scholastic work. With this a superintendent should not only be satisfied, but



WILLIAM DICK.

glad and content that his mind is relieved of the burden of financing. It may, not unkindly, be said that incumbents of the office of superintendent of schools are quite likely to err as other men. They have their hobbies, prejudices, selfish whims, quite as others do. They do, on occasions, "play politics." They at times "seek their own." They are fallible—supermen are rare even now. The pedestal of the average superintendent is not so very, very lofty.

Having joined with the superintendent in adopting his recommendation, it is only natural to suppose that the board of school directors, the official authority solely responsible to the people, will use its best endeavors to see that a proper sum of money, or at least so much of the school revenue as can be spared for the purpose, will be applied to the carrying out of the recommendation. A wise man would not ask, nor should it ever be permitted, that the determination of expenditure should drift away from those who are responsible to the people. No greater evil in public life can exist than that one should have the power to originate a requisition as to the expenditure of money, and have it passed uncensored.

In the small school system, the members of the board can pass upon the various items asked by the superintendent of schools, since not much time or labor is required for the purpose; but in a large school system, requiring the maintenance and operation of vast physical plants and equipment, members of the board cannot be expected, nor should they be required, to pass in person upon the detail of this work.

If such duties were imposed, it would not be possible to obtain the proper men or women for members of such a board. Since one man should not have the power to requisition and approve, or to purchase, it necessarily follows that a board should appoint also an efficient business administrator, who will be just as independent of the superintendent of schools in passing upon requisitions for material as the board itself in passing upon recommendations which the superintendent makes in the educational field.

This person, call him what you may, a secretary of the board or the business manager, should be the organ of the combined judgment of the members of the board, and should pass from day to day upon the questions of expenditure, in conformity with existing financial resources and obligations, in accordance with the general policy and specific instruction of the board. In the event of a final difference of opinion between the superintendent of schools and the financial representative of the board as to the propriety of a requisition, having due regard as to all the requirements of the system, that question can then be submitted to the board of directors for determination. A superintendent of schools should prefer such conduct of affairs to sole control, because it relieves him from criticism by the people, and more likely the result will be a just expenditure of money, since the combined judgment of at least two persons is involved.

Functions of Superintendent and Business Manager.

The school director who gives his time and labor without other reward than a consciousness of the performance of a public duty, is entitled to have a "clearing house certificate," so to say, before assuming obligations based alone upon the educational expert's recommendation. In this, the business manager, realizing both the needs of the schoolroom and the condition of the school treasury, plays a part not as an obstructionist, but as an actualist. In other words, the superintendent of schools should be the idealist, and the business manager the realist; both, of course, being broad and liberal-minded enough to work in harmony towards the common end, progress and the uplift of humanity.

For the purposes of discussion, let us see how the work of these two officials, organs and agents of the school board, diverge along separate and distinct paths, yet never so far apart but that different opinions, mutually exchanged, may be so coordinated and so correlated as to overcome seeming difficulties; at least, to the extent of financial possibilities, which should be the prescribed limits of the power of the business agent.

On the educational side there should be, *first, supervision,* requiring an intimate acquaintance with all educational functions, a system of explicit direction that will permit of placing responsibilities and holding to strict accountability, a check to see that all subordinates perform delegated duties, etc.

Second—The Course of Study. The superintendent should be sure that the requirements and standards set are carried out, yet allowing that freedom of thought and liberty of action within the law, so necessary to the work of a successful teacher or supervisor.

Third—The Health Control of the Pupils. All matter pertaining to sanitary rules, including the instruction and training of the teacher in the observance of all laws and regulations dealing with school hygiene.

Fourth—The Qualification of Teachers. The preparation of eligible lists for appointment and promotion, and to provide adequate opportunity for advancement and development of teachers in service.

Fifth—Special Work. Planning to aid the subnormals and to offer opportunities for the supernormals, dealing with the continuation school problem.

Sixth—Enlargements. Expansion and scope of new activities, considering how far should public schools be responsible for social centers, playgrounds and other recreational features, adult classes, school luncheons, care of the weak-minded, and the many other demands; in short, to what extent shall paternalism become a part of the public school system?

Seventh—Educational Mouthpiece. To be able to explain satisfactorily to the public what the schools are doing, the future tendency and

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what they hope to do, to be not only the historian but the prophet of the school system.

Business Side of the Schools.

On the other hand, there is the business side with its multiplicity of duties.

First—Real Estate. Acquisitions not only for present needs but looking ahead, a knowledge of the value of sites in given localities, planning ahead, how and why the city will grow, the construction and repairs and maintenance of physical plant.

Second—The Equipment. Economically (not parsimoniously) providing for the needs of the schools as outlined or requisitioned for by the superintendency, but within the financial resources at command.

Third—Operation. The provisioning of the plant with necessary machinery and supplies for the safety and comfort of pupil and teacher.

Fourth—Receipts. To recommend source of revenue and technical work of providing it, ways and means of financing, whether by bonding, serial or otherwise, or by direct taxation.

Fifth—Disbursements. In accordance with all governing laws and regulations of the school board, custody of all records, execution of contracts, and to devise proper means of informing the public by printed reports of costs in a manner intelligible to the average citizen.

Such are a few of the many duties devolving upon the superintendent and the business manager. It may be said that the superintendent could properly and wisely supervise these varied duties with suitable and efficient subordinates of his selection. If he does, he must necessarily spend much time, altogether too much time, in his office in non-educational activity. If there is any one duty imperative for the superintendent of schools, it is to give inspiration to the teacher. Without it, the teachers cannot hope to do their best work; for it is a truism often repeated, "as the teacher, so the school." To inspire, one must come in contact with the individual, if his influence is to be felt. Little inspiration is conveyed by letter or over the telephone. The teacher gets no inspiration from the superintendent who is so engrossed in business affairs that he rarely has the time or opportunity to leave his office or to fill up his own fountains.

It will be said there will be a conflict between the superintendent and business manager. Not necessarily. A conflict is a disagreement as to how a work shall be done; but it must always be remembered that there is the sole arbiter, the school board, which is not only umpire but legislator. It is the duty of the superintendent and business manager to recommend, but it is the office of the school board to decide, and when the two agree as to their recommendations, that school board would be oddly composed that did not give its approval.

It is often urged that there should be a specific budgeting setting forth what shall be spent for a given activity during the year, and in this phase of the discussion I shall probably be dealing with the larger school systems. Necessarily the various activities in such a system have to be parceled out among several assistants—a division of labor. In all divided labor, one necessarily becomes more proficient in that part of the labor which is directly assigned to him.

Check Needed on Expenditures.

In educational affairs one becomes more directly interested in the particular activities assigned to him. Consequently one is inclined to see only the needs of his own assignments, and not the needs of all the functions of the school system. No reason appeals to him why all of the money allotted at the beginning of the year to his particular activities should not be spent, even tho it is apparent that the need does not exist, and other activities are suffering.

Having this in mind, each agent proceeds to spend that which is allotted to his branch of the work and to spend it quickly. Thus it is that the things which are bought may be of use, probably will be, in the future; but since the activities of a school system for a year must be met out of the income of that year, it is absurd that one set of activities should provide for a future year or years, and other activities be lacking within the current year.

This necessarily leads to the board of directors, or, in a large school system, to the man whom they delegate, passing upon the requisition from the standpoint of the needs of the whole system, assured that there is a proper expenditure of the money in consideration of the needs of the school district. His task is made that much more difficult by a specific appropriation, inasmuch as he has to meet the contention of "why should you interfere?" since the appropriation is already made. There must be a rational method of spending the money at the command of a board of directors, and in no other way can such rational method be derived except by having the board of directors or its business representative pass upon the requisitions for the expenditure of moneys. It is their right and bounden duty as the representatives of the people, and what individual is there who can deny it to them? Surely, no one who is employed by them.

I would not say that there shall not be some budgeting. There must be some budgeting; at least, to the extent of absolute minimum requirements, and above that there probably should be a margin of allowance to the several functions. There should always be a considerable sum unallotted and unappropriated, which may be applied to the needs, as they arise, of those things already in the system, and with which and out of which to provide for functions to be launched. What is the use of any legislation during the course of a year, looking to the immediate launching of any new project which will require the expenditure of money, if all of the money has been already appropriated, and more particularly since, if appropriated with the uncontrolled right of expenditure. Since it was appropriated, it has probably been already spent long before the expiration of the year. It is not an answer to say that it has been taken care of in the appropriation bill, for that is to say that money had been put to the credit of an item for the carrying out of something which had not yet been thought of. If it had been thought of, and the money for it was desired, then the recommendation for its adoption would have been made before the appropriation was made.

School Boards Not to Be Rubber-Stamped.

Repeating, I would never yield to the thought that the board of school directors should not at all times be in absolute control of all the moneys at its command, and as an ardent advocate of the principle that in the expenditure of public moneys, requisitions issuing from any source whatsoever should be vised, either by the members of the board themselves, or by their duly accredited appointee, who shall be someone other than the requisitioner himself.

It is significant that wherever attempt has been made to secure state legislation providing for what may be termed "one man power" in control of school systems in the larger school districts, it has failed. In some few instances, such organization has been effected thru school surveys with the concurrence of the local school authorities. In such places it has not yet got beyond the experimental stage, and we can safely await further developments. Indeed, it might well be argued that a businessman of large capabilities, rather than the successful pedagog, be considered for the position of director-general of our schools, if boards of school directors are to be "rubber-stamped" and the power and control of the expenditure of the millions of school moneys are to be centralized in one supreme head.

In closing, I might add that even the superintendents are not a unit on the question of "one man power," for we find Superintendent Dyer of Boston quoted as saying:

"I will say that my personal preference is neither for an autocracy in which one person is responsible for everything; nor for a bureaucracy in which no person is responsible for anything; but rather for an organization of school administration similar to the well-tried and widely-approved St. Louis plan, in which a few heads of departments have well-defined, unmistakable and undivided authority, in the exercise of which they are not absolute, but are responsible to the school board."

This reference to the St. Louis plan is illuminated by the late Dr. Blewett, superintendent of schools of that city, when he said:

"Certainly the superintendent of instruction must have demand made upon him in his special field of work that will tax all his mental and physical capacity. Any regulation that placed upon him the responsibility of administration outside of his field would weaken his efficiency in his own particular field."

GREAT "WAKE UP AMERICA" PARADE PASSING THE LIBRARY, FIFTH AVENUE, NEW YORK CITY, WITH THOUSANDS LINED UP ALONG THE STREETS.

BALDWIN SCHOOL COTTAGE, MONTCLAIR, N. J.

KINDERGARTEN IN BALDWIN SCHOOL COTTAGE.

The School Cottage in Theory and Practice

D. C. Bliss, Montclair, N. J.

When a detached dwelling comes into possession of the school department thru the purchase of adjacent property, what practical use can be made of it? Measured in terms of classroom cost and the ideals of modern education which demand that instruction shall function in the child's experience, does such a house possess economic and educational value?

Generally speaking, it is regarded as an encumbrance and the officials think themselves fortunate if they are able to secure its removal at no cost to the school department. Such action disregards entirely the money value of the structure and what is more unfortunate, fails to take into consideration the adaptability of a dwelling house to certain forms of educational activity which have come to occupy a prominent place in the curriculum. Every modern building designed for grammar or high school grades, attempts to make provision for domestic science. Building limitations compel the authorities to provide quarters for this department which are highly artificial. No girl in her own home, works under the conditions existing in the typical school. The home kitchen is entirely unlike the school kitchen, while the dining room, sleeping apartment and bath room, when provided in a school are equally artificial. This violates a fundamental theory in education, that school practice shall conform as nearly as possible to the conditions under which the world's work is done. As will appear later, certain other activities are carried on in a cottage even more efficiently than in a typical classroom.

Montclair has recently made three additions to its school properties. On each of these plots was a dwelling house of a fairly good type. As it seemed wasteful to demolish these buildings, the whole situation was carefully considered to determine their value for school purposes.

The state building code and the experience of schoolmen with houses made it evident that they were unsatisfactory for regular classes, but it was not plain that they were equally unsuited to special activities.

One of the purchases was in the Baldwin St. district. This is a foreign section where organized efforts have been made to socialize the school. Additional playground space was imperative but it was impossible to purchase the desired land next to the school unless the whole property was taken. This consisted of approximately one and a half acres of garden land adjacent to the school and the house plot of an acre. The garden was developed as a playground, while the parked house lot with the dwelling was retained in its existing form.

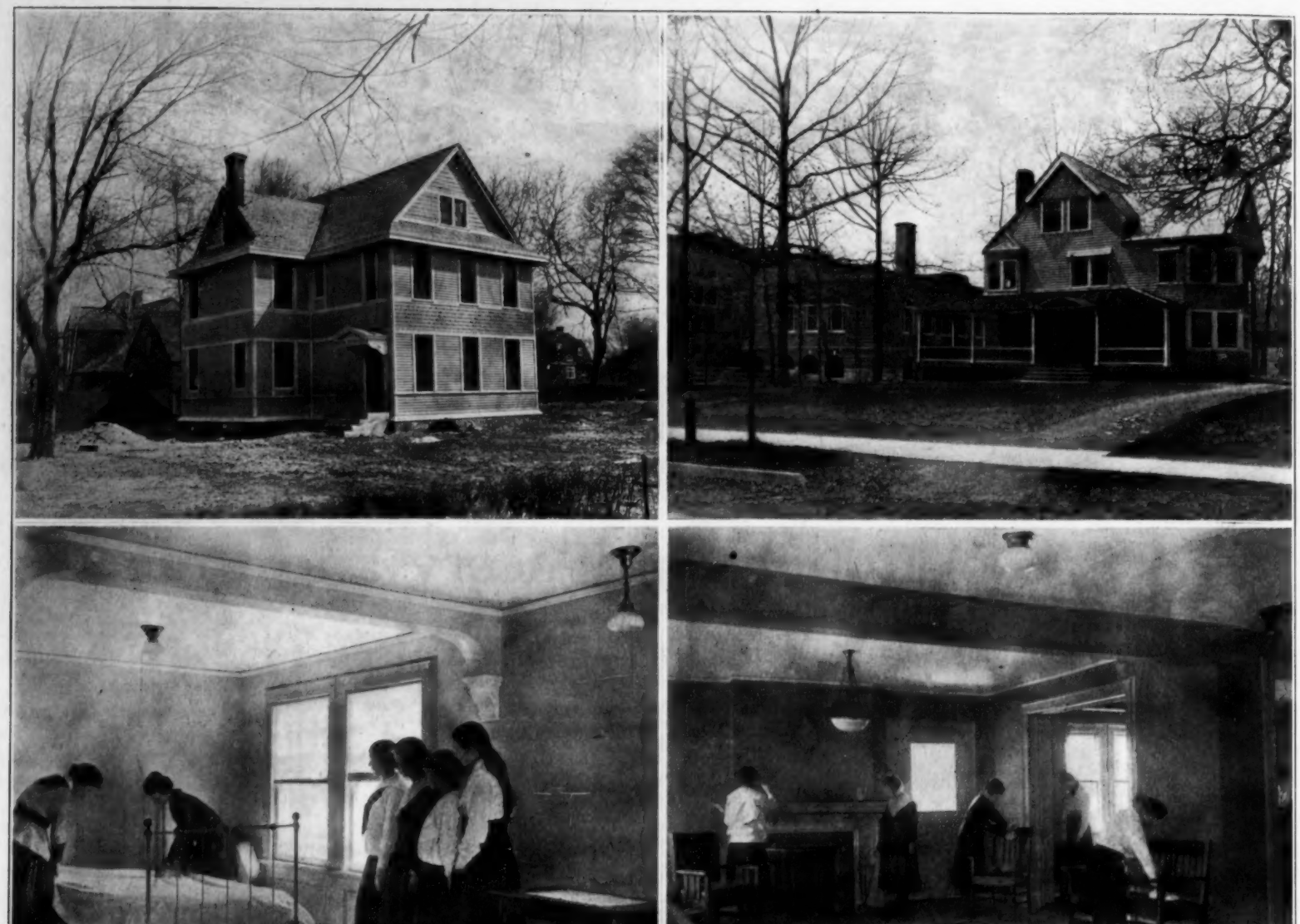
The house was an old-fashioned three-story structure with six rooms on the first floor, six on the second and five on the third.

The pupil enrollment was already in excess of the capacity of the school building, but instead of adding new rooms, it was decided to make slight changes in the dwelling house and use it to relieve the pressure. Under the state law, classes not exceeding fifteen enrolled pupils, must be provided for all children three or more years below normal. Of this type, two classes for girls and two for boys had already been organized in the Baldwin district. After canvassing the situation, it was decided to transfer the four-year-old kindergarten and the two classes of subnormal girls to the house. To do this certain changes in the building were necessary. Two parlors on the first floor were thrown into a single room. Closets and a kindergarten toilet were added. Here kindergarten work of the ordinary type is carried on. The wide porch, glass enclosed, makes a delightful supplementary playroom. In pleasant weather the shady, grass grown lawn is in constant use, even during the session. For the subnormal girls, the prescribed work consists largely of industrial arts, sewing for the elementary group and cooking for the advanced group.

Two rooms on the second floor were transformed into a single room which was used for sewing. The kitchen and the laundry were

SERVING LUNCH TO TEACHERS IN DINING ROOM OF BALDWIN COTTAGE.

PREPARING LUNCH IN BALDWIN COTTAGE.



Above (left to right), Mt. Hebron School Cottage; High School Cottage. Below, Home-making Instruction in High School: Practical Instruction in Home Care.

modified to make a single room used for cooking and laundry work. The dining room was left unchanged and here regular lunches, at cost are served to the teachers of the district. These conditions make it possible to carry on the household arts under conditions identical with those prevailing in the home.

The lunch serving project is intensely practical as it affords specific training in purchasing food, the preparation of menus and the cooking and serving of meals. Three thousand ten cent lunches were served here in a single year. This is done at no cost to the city, for the plan must be self supporting.

The teacher in charge reports monthly to the office, giving the total receipts and expenditures. The following statement is typical of the monthly reports.

Typical Report.

Statement of Lunch—January 13, 1914.

Menu.

Scalloped Corn
Chocolate Pudding
Biscuit
Tea

Material	*Amount*	*Cost*
Scalloped Corn—		
Corn	2 cans	$0.30
Crackers	½ lb.	.07
Butter	6 tbs.	.085
Salt and Pepper.		
Biscuit—		
Butter	6 tbs.	.085
Flour	3 C.	.04
Baking powder	6 tsp.	.10
Milk	2½ C.	.06
Butter for biscuits	¼ lb.	.10
Chocolate Pudding—		
Sugar	1½ C.	.045
Cornstarch	12 tbs.	.04
Chocolate	2 ozs.	.05
Milk	4 C.	.10
Tea—		
Tea	1/3 C.	.07
Sugar	1 C.	.03
Milk	1 C.	.02
Total cost of 12 lunches		$1.145
Cost of one lunch		.10

January 22, 1914.

Menu.

Macaroni and Tomato
Prune Whip
Bread and Butter
Tea

Material	*Amount*	*Entire Cost*
Macaroni and Tomato—		
Tomato	2 cans	$0.28
Macaroni	1 pkg.	.10
Onion	5 onions	.03
Butter	2 tbs.	.03
Bread Crumbs	1 C.	.02
Bread and Butter—		
Bread	2 loaves	.10
Butter	¼ lb.	.10
Prune Whip—		
Prunes	1½ lbs.	.23
Eggs	3	.10
Milk	3 C.	.07
Sugar	¾ C.	.02
Cornstarch	3 tbs.	.01
Tea—		
Tea	1/3 C.	.07
Sugar	1 C.	.03
Milk	1 C.	.02
Total cost of 13 lunches		$1.19
Cost of one lunch		.09

March Menus.

March 9—Macaroni and cheese
Bread and butter
Cottage pudding
Tea

March 10—Cream pea soup
Muffins
Apple sauce
Tea

March 12—Scalloped tomatoes
Biscuits
Orange pudding
Tea

March 23—Macaroni and potato
Bread and butter
Banana pudding
Tea

Luncheon Report for March, 1914.

Date	Expenses	Lunches	Receipts
March 3	$0.95	13	$1.30
March 5	1.29	13	1.30
March 9	.98	15	1.50
March 10	1.81	15	1.50
March 12	1.15	14	1.40
March 16	1.42	13	1.30
March 17	1.26	14	1.40
March 19	1.69	15	1.50
March 23	1.01	12	1.20
March 24	1.15	13	1.30
March 26	1.42	15	1.50
March 30	1.65	15	1.50
March 31	1.30	12	1.20
	$17.06		$17.90
Amount on hand March 1			$ 2.84
Receipts for March			17.90
Total			$20.74
Expenses for March			18.06
Amount on hand April 1, 1914			$ 2.68

It is a self evident proposition that such work as this could not be carried on in the classroom with the same degree of efficiency. Probable space limitations in a school building destroy

(Continued on Page 69)

ACCREDITING SECONDARY SCHOOLS*

C. O. Davis, Ann Arbor, Mich.

The accrediting system as it is understood today has been known for less than fifty years. It had its inception and birth at the University of Michigan in 1871, and for many years thereafter was frequently styled "The Michigan Plan of Admission to College." Since 1871 it has been extended to nearly every section of the Union. It has even—in camouflaged form—made its way into the portals of the ultra-conservative institutions of learning and today bids fair, like the proverbial camel, of getting completely into many of them.

The accrediting system has developed as it has because it rests upon a solid principle of democracy. That principle is that every individual within the commonwealth is entitled to the same opportunities for education that every other individual possesses, that it is the duty of the state to provide these opportunities, and that the state school system is a unity, albeit composed of differentiated parts. Under this theory the university is not an institution which can rightfully stand aloof and apart from the other forms of culture, but is the crown and head of the school system. It must, therefore, articulate as closely and as fully with the other divisions of the system as circumstances will permit.

The accrediting system of schools was developed in order that this articulation might be perfected—the university to engage in research and to advise, stimulate and assist the secondary schools in formulating and solving their problems, and the secondary schools to apply and adapt the educational theories of the universities to concrete situations, to refer them to their authors for re-formulation after trial, and to offer suggestions developed from practical experiences in a world less circumscribed than that of academic halls.

Despite the assertions of misinformed demagogs or vicious self-seekers, there is, in purpose and intent, no domination or dictation of colleges and universities over the high schools of the country—and never has been and never can be. Misunderstandings have of course arisen at times between the two types of institutions, but these have resulted from ignorance, or natural biases, or prejudices, and not from any inherent fault in a state school system nor its purposeful administration. The aim of the accrediting system has been essentially to remove conditions latent with causes for suspicions, to minimize misunderstandings, and to eliminate educational forces that work at cross purposes with each other. The experiences of the past fifty years indicate that to a large degree these aims have been realized. A sympathetic appreciation of each other's point of view and a spirit of mutual helpfulness has come to both colleges and secondary schools.

Bridging the Gap.

No doubt other motives than these operated at the outset, at least, to bring about a modification of the old type college entrance examination and the substitution therefor of the accrediting plan. A half century ago few colleges in the middle west, certainly, were economically well conditioned. There were many competing schools. Each was struggling for popular favor, if, indeed, not for its own very existence. To insure its future each needed a guaranteed incoming freshman class annually—guaranteed both as to numbers and as to purposes. The accrediting system has operated to these ends. It has bridged the gap between the high school and the university.

*An Address delivered in Chicago, March 16, 1918, before the North Central Academic Association.

The old type college examination was an ordeal. Not only did it require young people to undergo rigid tests in a half-dozen or more branches—and these tests crowded into one week, conducted at a distance from home, given by a strange and therefore awe-inspiring body of examiners—but it kept the prospective student on the anxious seat for weeks, if not months. No doubt there is much to be said in favor of the anxious seat kind of salvation, but it may have its disadvantages as well as its advantages. At any rate, the accrediting system has—either for good or for evil—largely done away with that type of regeneration. Under its operation all uncertainties for the prospective college freshman terminate on high school commencement night when he receives his secondary school diploma. Perhaps the contemptible modern ironical expression "I should worry" could trace its birth to the inauguration of the accrediting system. If so, it is another example of the degeneracy of the offspring begotten by firm fibered parents! It ought not to reflect adversely on the progenetors, even tho the line of descent could be clearly established.

Likewise the accrediting system early found favor with others than university presidents and high school pupils. College professors approved the plan because it eliminated the necessity of reading and grading large numbers of examination papers just at the busiest period of the year, when the machinery of administration was being put in order and when time was preoccupied with committee meetings and other duties incidental to collegiate affairs. The plan, too, did away, in a measure, with the delay and tedium of getting class schedules prepared and class work begun. Particularly was this a decided help later when uniform curricula were abolished and the elective system of administration introduced. So long as semester elections of subjects could not be made until students were actually admitted to the university, a week or more devoted to examinations just at the outset of the college year, retarded the operation of getting started unduly long. Indeed, the two most outstanding changes or characteristics of colleges in the last half century, namely, the enormous increase in student attendance and the enormous addititious development of systemitized knowledge which was offered them, almost of necessity and as a resultant, forced the adoption of the elective system, which in turn strengthened the arguments for a modification of the old type admission examination to college. Hence each and all of these forces worked toward the introduction, retention and expansion of some form of the accrediting system.

Moreover, the accrediting plan was regarded in theory as a safer, saner and surer test of a pupil's ability than could be had by any short, formal and chance examination. Experience seems, also, to have borne out this belief. At the present time wherever the accrediting plan is in operation it is, for the most part, so fully in operation that little opportunity for comparisons of results with other forms of administration is possible. In the College of Literature, Science and Arts of the University of Michigan, for example, with a freshman class numbering approximately 800 students each year, fewer than five each year have, in the past dozen years, entered by way of the examinations.† In the earlier days, however, when admissions were nearly equally divided between the two plans, the records of the university show that the standard of work and of deportment maintained by students admitted on the accrediting plan was superior to that of students admitted by examination. President Angell, in his annual reports for a number of years following the innovation at Michigan, refers to the fact with pride and satisfaction.

Bringing the University and the High School Together.

Two other distinct advantages of the accrediting system exist. The scheme, by means of visits of inspection by members of the college faculty and thru association meetings, brings representatives of the higher institution into personal contact with secondary school men and women, and often, with the taxpayers supporting the entire school system. Such intercourse tends to give concreteness and definiteness and balance to academic efforts. It shifts points of view and tends to correct biases—not to say ignorance—respecting the aims, purposes, and administration of the school system as a whole. On the other hand, to receive a visit from a college professor, coming in an official capacity, is a notable event in the schools and communities unaccustomed to visits of the kind. For months—indeed for years, often—the intellectual ambitions of small towns have been stimulated, kept alive, and led forward merely by the promise of university inspection and the hope of becoming an accredited school. By reason of the stimulus standards of scholarship among both teachers and pupils are raised, salaries are advanced, improved buildings and added equipment are secured, and a spirit of progress in general is infused. If finally the little school attains the coveted desire, it cherishes the honor with affection. The fact of being accredited is heralded from school platform and disseminated thru local papers. Citizens comment on it, and an added attraction to rural pupils to attend the school is established. Indeed, there is yet to be discovered, so far as the writer's experience goes, a single school that, once having been accredited, has wilfully and deliberately allowed the relationship to lapse. On the contrary, in scores of instances, when, due to violations of accrediting standards — willingly or unwillingly — schools have been removed from the university accredited list, no stone has been left unturned, almost no cost has been too great to pay, to restore the school to its former position.

A similar, tho probably not so pronounced a sentiment is held by universities which employ the accrediting system. No doubt there are some among the faculties who would return completely to the older system of examinations. No doubt there are some—perhaps a large number—that would prefer a modified plan of accrediting—a plan that should retain the best features, and eliminate the worst features, of both the examination method and the accrediting plan. But it is to be doubted, if there are many university people or secondary school people who once having made use of the principle of the accrediting plan would depart from it absolutely.

In the earlier days accrediting was secured by means of recommendations made by a committee of the literary faculty after a visit of inspection, *in a body*, to the secondary school. This committee frequently consisted of a representative of each of the departments of learning directly articulating with the high school. A professor

†The exact figures for the current academic year (When the total number of freshmen is decidedly smaller than usual) are: Entered on diplomas, 724; entered on advanced standing from other colleges but with less than 30 hours, 29; entered on N. Y. Regents certificates or certificates from New England Examination Board, 5; entered on University of Michigan examination, 1. Nine other *special students*—students over-aged and examined in English only—were also members of the freshman class.

of the ancient languages, of one, at least, of the modern foreign languages, of mathematics, and possibly also of English, of history, and of science made up the visiting committee. Each member gave particular attention in the high school to the attainments and practices in the department of his specialty. Reports were made directly to the president of the university and, sometimes, to the faculty. Schools were accredited as wholes or in respect to certain specified subjects or courses. Thus a school might be accredited as a school, or as to Latin but not mathematics, or as to Latin and mathematics and not as to science. Or the school might be accredited so far as admission was concerned for the college course or curriculum in Latin, but not in arts; or in philosophy but not in science.

Disadvantages of Group Inspections.

The inspection by faculty groups, however, has its disadvantages as well as its decided merits. It is financially expensive. It seriously interferes with university class teaching. It tends to over-stress bookishness in the high school—that is, collegiate methods and viewpoints. If but one professor, a specialist in a limited field of scholarship, alone is permitted to inspect the school the results are often still more unsatisfactory—a very biased and one-sided report is not infrequently made. As is natural, he is chiefly interested in, and sees, the weaknesses or elements of strength in the single department of his specialty. His recommendations both to the school and to the university are therefore very likely to be unsafe and impractical.

When the new department of education (or pedagogy as it was at first styled) made its way into the colleges it was thought that the task of inspecting and recommending high schools for accrediting belonged rightly and logically to it. The department being young, it was argued, the professor in charge would have more time available for visits of inspection to high schools. Moreover, he was by interest, training and experience best suited and fitted for the task. The result was that the duties pertaining to the whole question of examining and accrediting schools was gradually shifted to the new professor, altho for some years later members in other departments made occasional inspection trips.

In due course of time, as would be expected, the obligations connected with the accrediting system developed to such an extent that it was deemed expedient to employ one person who should devote his entire time to the duties. This is, in general, the prevailing practice today in most universities. Ideally, the man employed should be one who has had a thoro collegiate training, supplemented by actual experience as a teacher and administrator in secondary schools, who possesses a virile, vigorous personality, who loves and understands young people of the adolescent age, who is a close and rapid observer of school conditions, who is himself a teacher of superior power and has a real acquaintance with the best classroom methods in a variety of subjects, who is fearless but tactful in pointing out weaknesses and recommending improvements, who is a convincing speaker, who is courteous, refined and cultured, and who, perhaps above all, inspires his associates in college and school with a confidence in his sanity of judgment, directness of execution, and accuracy of statements. The unannounced entrance of a man of this type into a high school produces no flutter of embarrassment among teachers, precipitates no spirit of unruliness or uneasiness among pupils, and arouses no fear of unfounded or harsh criticisms among administrative officers. His unobtrusive manner, his attitude of sympathetic appreciation, his tactful constructive criticisms, and his kindly words of encouragement win for him heartiest commendation. He is regarded everywhere as an inspirer, helper, friend. That is, he possesses all the above traits and receives all the above rewards if he is ideally suited for his task.

The Routine of Accrediting.

The usual routine of procedure concerned with accrediting schools is (basing the statements on practices with which the writer is most familiar) as follows: Assuming the school is one that hitherto has not enjoyed certificate privileges with the university, the initiative is with the school. By correspondence (or otherwise) with the university it makes known its desires. If the first communications indicate that the school is genuinely willing to accept university leadership and advice, a set of formal questions to be answered is mailed to it. These questions seek to discover (1) whether the school is technically able to meet university standards of admission, that is, employs at least three high school teachers, requires fifteen units of graduation, has a school day and a recitation period of appropriate lengths, and similar matters; (2) whether the board of education and the community in general are in favor of making the school an accredited school, or whether the notion is purely a personal one of the superintendent; and (3) whether there are students definitely preparing for college.

On receipt of satisfactory replies to the above queries, a personal visit of inspection is planned. Customarily the inspector arrives early and stays late, giving the entire day to the task. He observes the building and grounds, the equipment, the library, the discipline, the school spirit, the attitudes and habits of pupils and teachers, the routine factors of administration, the mode of keeping records, and the social and moral tone of the school and community. He visits classes, participates, frequently, in class discussions, tests pupils' knowledge and power by quizzing, educes for teachers information pertaining to the school problems that are closely connected with their special work, and offers constructive and, if need be, destructive criticisms. In short, he devotes the entire day in the making and remaking of judgments. Nevertheless he concerns himself less with the details of methods used in the schools, than with the principles and policies which underlie them—with the spirit and attitudes and habits that predominate rather than with particular modes of organization and procedure. As previously implied, therefore, the task calls for a man of broad vision, keen insight, and superior qualities of pedagogical administration.

At the close of the day on which the visit of examination is made, the inspector not infrequently meets with the members of the board of education and together the situation pertaining to the school is reviewed.

At stated intervals, or whenever a considerable number of schools have been visited, a formal and somewhat elaborate report concerning all of them is made by the inspector to a standing committee of the university. At the University of Michigan, for example, this committee, styled the "diploma school committee," consists of the president, the deans of the literary and the engineering colleges, the university registrar and five or six professors appointed to represent different departments of learning. Before this body the facts bearing upon each particular school are presented. Questions are asked and answered and a decision is finally rendered as to the accreditability and the period of accreditability for each school. The judgment given is final and stands without reference to the faculty or regents.

Periods of accrediting vary in accordance with the strength and character of each school. Some schools, of course, are rejected outright. Others are placed on a probation list, so to speak, and are nursed along by the university for a year or more. At the expiration of a reasonable period of nursing, however, and after a second or third visit by the inspector, a school of this type must either show sufficient strength to walk alone, without the constant attention of the university, or be eliminated entirely from the accredited list. The unwritten rule is: expand and wax stronger or cease to be ambitious.

Re-accrediting by Inspection.

The term for accrediting among the more developed or older schools is two or three years. No school, not even the most efficient, is accredited for a longer period than three years, and is re-accredited only after another official visit of inspection has been made. Hence every school on the accredited list is carefully inspected once in three years, and the great majority of them every year, or every second year. Schools once accredited enjoy the privilege, conditionally, of sending pupils to the university without further examination. Let me repeat, this is true conditionally and within certain limits. These conditions are that the student shall actually have been graduated from the given high school, with not fewer than fifteen units as commonly defined in collegiate circles; shall have included in his subjects of study in the high school certain positive requirements, among these being three units of English, two of mathematics, two of a foreign language, and one of science; shall have pursued two subjects, including English, to the extent of three units each; and shall have the personal and official recommendation of the high school principal or the superintendent of schools. The latter requirement is deemed highly important. It is logical and wise that certain individuals shall be given the honor of graduating from high school, but should not be advised or encouraged to continue their schooling in universities. The secondary school authorities know better than any one else who these persons are. The responsibility, therefore, of deciding which pupils should be thus discouraged is placed where it rightfully belongs—on the high school principal.

Even tho the committee action respecting a school is favorable, and the school is formally accredited for a year or a period of years, the decision is, after all, not without revision. The true test of a school's efficiency, so far as colleges and universities are concerned, is: Can the pupils pursue the university work with satisfaction? If (as happens only in rare cases) the freshman records of pupils coming from a school indicate that the acting of the committee in accrediting the school was unfortunate, certificate privileges are forthwith annulled, or another inspection of the school is made whether the term for which it was previously accredited has expired or not. It can not be too firmly impressed upon school officers that the accrediting system does not contemplate the unlimited recommendation to college of all pupils who may be allowed to graduate. Indeed, under the perfect ideal working of the scheme, those pupils only should be recommended to college whose ability, power of application, and attainments are of "such superior grade that the school is willing to stand sponsor for their success at the university."

The accrediting system, however, as has been stated, does not solely seek advantages for the university. It is a mutual co-operating agency. The plan contemplates that the schools shall at all times be in close relationship with the university; shall call on it for advice and guidance;

and shall be assisted in solving their problems. Hence even tho a school be not technically eligible for accrediting, and expects never to be, it may, under the complete operation of the accrediting system, receive an official visit of inspection and be given the benefits of the inspector's observations and recommendations. This type of inspectorial help is frequently rendered.

Two Present Day Accrediting Agencies.

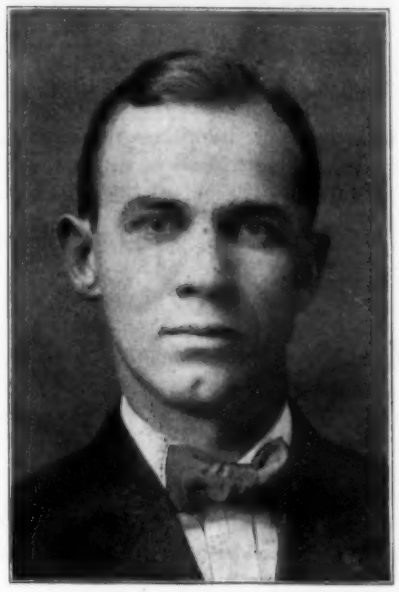
Within recent years the university accrediting plan has been greatly affected by the development of similar accrediting agencies of other powers. There are two types that call for consideration. One of these possesses no legal status but exerts an enormous moral and institutional effect. It is supplementing and aiding university inspection. The other is founded in law and is to a greater or less degree separate and distinct from university control and co-operation. The one is an interstate association; the other is centered in the state department of public instruction in each of the several states. The one works thru the state agencies, particularly the university; the other operates more or less independently of all other authorities. May we consider them briefly in turn?

In certain states, for example, Montana, North Dakota, South Dakota, Kansas, the state department is the only agency recognized as having legal right to inspect, accredit and classify public secondary schools. In other states, for example, Michigan, Ohio, Illinois, Wisconsin, a co-operative arrangement of inspection and accrediting obtains between the state university and the state department. Where the latter custom prevails there is, frequently at least, a division of territory to be inspected, personal conferences of inspectors, and an exchange of reports and recommendations. The detailed procedure in carrying forward the inspections and in accrediting the schools is, in no vital respect, greatly different under either plan from those already outlined in this paper.

Of the interstate co-operative accrediting agencies, four in particular exert wide influence. These are the New England College Entrance Certificate Board, the Association of Colleges and Preparatory Schools of the Middle States and Maryland, the Association of Colleges and Secondary Schools of the Southern States, and the North Central Association of Colleges and Secondary Schools. An analysis of the work of the North Central Association of Colleges and Secondary Schools in accrediting high schools and academies may be of interest.

This association now composed of eighteen states is a purely voluntary association. It was first organized in 1895, partly as the constitution declares: "To establish closer relations between the secondary schools and the institutions of higher education in the North Central States and such other territory as the Association may recognize"; partly, to raise standards of attainments in all educational institutions; and partly as an economic arrangement in order to divide the burdens of inspection and to eliminate duplication.

Before the North Central Association had its rise, it was customary for universities to send their inspectors to visit secondary schools outside the limits of their own states. Instances are recorded of a dozen visits of inspection of the same high school within a period of one month, and, indeed, of not fewer than three inspectors representing three separate institutions being present in the same high school on the same day. Inspection thus carried forward was in danger of over-shooting its mark. The inspectors engaged in the work were in danger of being declared school nuisances.



E. C. HARTWELL
Superintendent-elect, Buffalo, N. Y.
(See Editorial Page 52)

The Association a Clearing House.

The result was the North Central Association. In its organization were the possibilities of a clearing house for inspectors, and for inspectors' reports. Each state university entering the association undertook to be responsible for the careful inspection of the secondary schools of its own state and to send its inspector once a year to hold conferences with inspectors from other states in the association. Each carried with him complete records of all schools visited, and an exchange of lists of accreditable schools was made. To insure high standards of attainment within the schools, and uniformity of judgment in evaluating their work, a definite set of principles was formulated for common guidance. These standards for accrediting were purposely made considerably more exacting than any standards then employed by the university in making up its own private list of accredited schools. To receive recognition from the North Central Association was to be a superior mark of distinction. The same policy prevails today.

Until recently this board of inspectors as it was officially styled, annually canvassed the returns of the several schools seeking North Central accrediting, and did so more or less privately. Their recommendations were then presented to the association as a whole and were adopted, or modified, or rejected by that body. Under the older regime, therefore, recommendations were formulated by a small number of individuals, the board nominally consisting of one inspector from each state having membership in the association.

Under the operation of a revised constitution adopted in 1916, the old board of inspectors was abolished, and in lieu thereof a *"commission on secondary schools"* was created. This commission consists of 72 members. Its constituency and duties can best be shown by including here an excerpt from the constitution. Section 5 reads as follows:

"The commission on secondary schools shall consist of (a) the high school examiner or corresponding officer for the state university in each state within the territory of the association; or, in case there is no such officer, some member of its faculty designated by the state university for the purpose; (b) the inspector of high schools, if any, of the state department of public instruction in each state within the territory of the association; (c) a principal of a secondary school accredited by the association, to be elected by the association on the nomination of the executive committee for a period of three years, one-third of the number to be elected each year; and (d) eighteen other persons to be elected by the association on the nomination of the executive committee for a period of three years, one-third of the number to be elected each year.

"This commission shall prepare, subject to the approval of the association, a statement of the standards to be met by secondary schools accredited by the association; shall make such inspection of schools as it deems necessary, and shall prepare for the executive committee lists of the secondary schools within the territory of the association which conform to the standards prescribed."

While the final review of the conditions and attainments of the several schools seeking accrediting honors in the association are made by the commission thus organized, and while this commission makes the positive recommendations to the association as a whole, the real detailed work upon which both these practices are based involves numerous supplementary agencies and activities, and extends its operations over a period which includes the greater portion of the year. Just as under the older arrangement, the truly responsible and directive forces of the commission today are the high school inspectors —university or state. It is they still who inspect the schools; it is they still who mail, collect, classify, and first scrutinize the annual report demanded by the commission; it is they who write follow-up letters needed to clarify obscure replies in the annual reports; it is they who are held responsible for the filing of all required forms; it is they who notify schools in detail of the action of the association respecting their standing; it is they who take the brunt of criticisms that may be directed locally against the association; it is they, in short, who constitute the intermediaries between the association and the local constituencies.

An Honor to be Accredited.

Nevertheless, the task of the commission is by no means purely formal. Annual blanks are sent to each secondary school thought to be eligible by the local representative of the association in each state early in the autumn of every year. When these are collected the three members of the commission from that particular state meet in conference and scrutinize the returns. Upon these data, lists of schools are determined. In general there are four classes, namely, (1) schools already on the North-Central accredited list which can, in the judgment of the local committee, be unqualifiedly recommended for re-accrediting; (2) those schools which have so violated North central standards as to make it necessary, in the judgment of the committee, to drop them from the list entirely; (3) those schools that have, perchance, observed the technical requirements of the association, but have violated the spirit of the standards, or else have departed in minor points from the association ideals, and need, therefore, in the judgment of the local committee, to be *warned* of their danger of future rejection unless desirable improvements are made within a twelve month period; and (4) new schools seeking accrediting for the first time and, therefore, presenting data that call for detailed analysis by the larger committees.

These lists, alphabetically arranged and bearing the comments and recommendations of the local committee, are laid before the entire commission of 72 members. For three days, as a rule, this body is engaged in reviewing the reports and recommendations, and in making up the final list of schools to be accredited. The association as a whole is then presented with the final report and takes final action.

(*Concluded on Page 69*)

UNIFORMITY IN THE CLASSIFICATION OF SCHOOL EXPENDITURES

Lorin C. Powers, Chief Accountant, Philadelphia Board of Education

A plan for reporting school expenditures, to be of universal application thruout the United States, should be based on sound accounting principles, should be clear cut and conclusive as to its terminology and should be so elastic as to be adapted to the smallest as well as the largest school district.

In the consideration of expenditures, each payment should be analyzed, in the order stated below, for the purpose of developing the following information:

A. Accounting nature.
B. Function.
C. Character.
D. Object.
E. Location.

By accounting nature is here meant whether the payment may be considered as an expense and therefore represents a dissipation of income, or whether it represents an outlay of capital for some object or purpose having a more or less permanent or lasting value, thereby representing merely the conversion of the asset cash into another form of an asset, or a group of items of a mixed nature to be called, "Redemption of debt, refunds and contingencies." All payments made for the immediate redemption of debt reduce a liability, and all payments to sinking funds for the ultimate liquidation of debt establish an offset to a liability. Refunds and contingencies or losses represent either a credit to revenue or surplus accounts and are not true expense items.

Function is intended to convey the idea of the kind of service effected by the payment. The prime function for which the schools exist is for the education of the children. For the purpose of properly conducting the primary function of teaching the children, it is necessary to raise the money, buy the supplies, erect the buildings, pay the bills and direct the nature and character of the instruction. For this purpose we have the executive or administrative function performed. Beside these functions the average school district of today renders many other services which are sometimes spoken of as social services such as caring for the health of the children, providing recreation for them and providing amusement and instruction for their parents. These services we group then under a third head of "Auxiliary agencies and sundry activities."

No matter to what function an expenditure may appertain the character of the expenditure relates to one of the following classes:

1. Supervision (of the work of the function).
2. Execution (of the work of the function).
3. Operation (of the plant of the function).
4. Maintenance (or upkeep of the plant for the function).
5. General (overhead or assignable to one or more of the above classes but not capable of exact apportionment).

In order to have any function properly performed it must be adequately supervised; the workers, and in the case of instruction, the children, must be properly housed, the building must be suitably operated, and the plant must be maintained or kept in such a state of repair as to permit its proper operation and to allow the children to be taught under the most advantageous conditions. In the average city, by reason of the magnitude of the task, the maintenance of the plant has come to be considered as a function to be treated quite apart from the operation of the plant. In addition to expense of the classes mentioned above, there are other items so general in their nature, or which are properly assignable to two or more of the foregoing characters of expense, but which are not capable of being exactly apportioned, which are to be classed under a character heading "General."

In setting forth expenditures upon a schedule it may not be desired or necessary to present a separation of the expense for each function under the above characters. For example, by glancing at the suggested schedule headings at the close of this paper it will be observed that there is no provision for indicating the cost of supervision of "Administration" because it is not usually considered of sufficient importance. The same is true with regard to "Auxiliary Agencies" but for "Instruction," expense is analyzed under each of the above mentioned characters.

The heading "Object" is intended to indicate the thing purchased. For the purpose of analysis under this classification, the outline of "Objects of Expenditure" as prepared by President Taft's Commission on Economy and Efficiency, of which the following are the primary classes, is suggested:

1. Personal services.
2. Services other than personal.
3. Materials and supplies.
4. Equipment.
5. Land.
6. Structures and non-structural improvements.
7. Rights and obligations and payments of debts.
8. Fixed charges and contributions (including pensions).
9. Losses and contingencies.

"Location" is to express the office, department or school benefited by the payment and the arrangement of this class will naturally be dependent upon the physical organization perfected for the purpose of administering and executing the functions of the school district.

Having set forth and explained the principles upon which the analysis of expenditures is to be made, it may be well to summarize the foregoing in skeleton form as follows:

A. Accounting Nature—
   1. Expense.
   2. Capital Outlay.
   3. Redemption of debt, refunds and contingencies.
B. Function—
   1. Executive (administrative) service.
   2. Teaching (instructional) service.
   3. Auxiliary (social) service.
C. Character—
   1. Supervision.
   2. Execution.
   3. Operation.
   4. Maintenance (upkeep).
   5. General (overhead or indistributable).
D. Object—
   1. Personal services.
   2. Services other than personal.
   3. Materials and supplies.
   4. Equipment.
   5. Land.
   6. Structures and non-structural improvements.
   7. Rights and obligations and payments of debts.
   8. Fixed charges and contributions (including pensions).
   9. Losses and contingencies.
E. Location (the office or school benefited by the payment).

Having explained the purpose desired to be accomplished in reporting school expenditures and having stated the primary features to be set forth, in the order of their importance, the following is tentatively presented as the outline of a schedule to produce the desired results.

Suggested Outline of a Schedule for Reporting School Expenditures.

A. EXPENSE—

I. Administration—
(Subdivided across the page into columns headed: 1, Total; 2, Salaries; 3, Other Subjects).
(A) *Business Administration*—
1. School elections.
2. Board of Education and Secretary's Office.
3. School Census.
4. Finance offices and accounts.
5. Legal services.
6. Offices in charge of buildings and supplies.
7. Other expense of business administration.
(B) *Educational administration*—
1. Office of Superintendent of Schools.
2. Enforcement of compulsory education.
3. Other expense of educational administration.
(C) *Operation of buildings* used for administration purposes (Subdivided like III below if desired).
(D) *Maintenance of buildings* used for administrative purposes (subdivided like IV below if desired).
Total Expense of Administration.

II. Instruction—
(Subdivided across the page into columns headed: 1, Total; 2, Elementary; 3, Secondary; 4, Normal; 5, Vocational; 6, Special.)
(A) *Day Schools*—
1. Supervision—
(a) Salaries of supervisors of grades and subjects.
(b) Other expenses of supervisors.
(c) Salaries of principals, clerks and office assistants.
(d) Other expense of principal's office.
(e) Other expense of supervision.
2. Teaching—
(a) Salaries of teachers.
(b) Textbooks.
(c) Other supplies used in instruction.
(d) Other expense of instruction.
(1) Tuition paid for children in institutions and in private schools and schools of other civil divisions.
(2) Commencement exercises and exhibits.
(3) Transportation of pupils.
(4) Transportation of teachers.
Total Expense of Instruction for Day Schools.
(B) *Night Schools*—
(Same subdivision and cross headings as for Day Schools.)

III. Operation of School Plant—
(Subdivided across the page into columns headed: 1, Total; 2, Elementary; 3, Secondary; 4, Normal; 5, Vocational; 6, Special.)
(A) Wages of janitors and other employees.
(B) Fuel.
(C) Water.
(D) Light and power.
(E) Janitors' supplies.
(F) Other expense of operation of school plant.
1. General care of grounds.
2. Removal of ashes.
3. Cartage, including moving of furniture (not including repairs).
4. Disinfecting and laundry service.
Total Expense of Operation of School Plant.

IV. Maintenance of School Plant—
(Subdivided across the page into columns headed: 1, Total; 2, Elementary; 3, Secondary; 4, Normal; 5, Vocational; 6, Special.)
(A) Upkeep of grounds.
(B) Repair of buildings.
(C) Repair of equipment.
(D) Replacement of equipment.
(E) Other expense of maintenance of school plant.

(*Concluded on Page* 67)

Budget Making by the Board of Education

William T. Keough, Business Agent, Boston Public Schools

In a paper read before the Department of Superintendence at Atlantic City in February last, entitled "Efficient Finance in a City School System," and printed in the June number of the SCHOOL BOARD JOURNAL, is a discussion of budget making so representative of the point of view of a certain school of educators at the present time that I have thought that a discussion of it from the standpoint of one connected with school administration for more than a dozen years might be of some interest.

* * *

Much of the matter in the paper is so generally accepted and so elementary that I shall not refer to it, but I must call attention to one or two inferences which the reader might draw from some of the statements made.

The first is, that the money available for school purposes in Boston may be estimated within ten thousand dollars two months before the close of the financial year.

In discussing the money available the author makes the following statements:

"The Department of Educational Investigation and Measurement, which was asked by the superintendent to make a study of the system of budget making, proposed that more time be secured for making a school budget by estimating in advance the amount of money likely to be available from taxation, from income, and from unexpended balances, and proceeding at once with the preparation of a tentative budget."

"Necessary data for making such estimates are available as soon as the assessing department announces the valuation of the city, usually during August."

Then, after referring to a statistical method by which the amount of money available *from taxation* may be estimated (after the valuation has been announced by the assessing department in August), the author shows that in each case the estimate of the amount available (*from taxation*) was within ten thousand dollars of the actual amount. He thereupon concludes that "because the estimates of gross income can be made in advance, Boston now begins the preparation of the tentative budget December 1." That is, because the "statistical method" has been applied to the slow fluctuations in increase of the valuation of a fully developed city like Boston and has been found to give results within ten thousand dollars, he has assumed that the *gross amount* available can be estimated two months in advance and the error kept within that amount; and, as a result of such accurate forecasting, a change has been made in the date of the beginning of the preparation of the tentative budget.

Such confidence is born solely of the author's enthusiasm, drawn from his experience in studying a single budget for one city. Not only is this not the case in Boston, but it is not the case in any other city or in any other business of similar size. In Boston, expenditures during the last two months of the financial year sometimes aggregate upwards of seven hundred thousand dollars, exclusive of those for new buildings or sites. Substantial parts of such expenditures and certain items of income are under the control of bodies or individuals independent of the control of the school committee. Moreover, a drop in temperature of 25 degrees for a single week would cause an additional expenditure for fuel of more than the amount stated.

It is true that in the year the author has in mind the present writer did estimate the total money available within ten thousand dollars, but such accuracy is wholly a matter of chance, as the total errors in such preliminary estimates amounted to more than $38,000 and it merely happened that such errors very nearly counterbalanced each other.

During the last five years the money available from sources other than taxation has fluctuated as follows:

1914-15	$168,901.44
1915-16	208,255.79
1916-17	190,719.22
1917-18	305,667.58
1918-19	221,510.41

These are substantial sums, which the author apparently sets aside as negligible, when he states that "this (statistical) method has been discussed here briefly because it illustrates how statistical science has contributed to the satisfactory solution of a pressing administrative problem." Statistical science undoubtedly has its field of usefulness, but it is not a handy or efficient tool for use in estimating large unexpended balances or income items for use in the determination, very far in advance, of the money available.

As any one with experience in budget making knows, unexpended balances at the end of the year are a matter of relative growth in school population and school funds available, relative cost of fuel, supplies and labor, and weather conditions. The forecasting of the size of these items is not a problem that lends itself to treatment by "statistical methods," nor does any business establishment think of using such processes for the determination of such amounts. Perhaps if they did the statistician might be more in evidence in the business world than he is today.

But great accuracy in making up preliminary estimates of money available is unnecessary because, very soon after the school board is legally competent to pass upon the budget, the exact amount of money available is always known.

The author makes the following statements:

"More important than this, it (the centralization in one office of all business matters) has also tended to make it difficult, if not impossible, for any one in the school service to keep himself adequately informed on educational costs. In most cities, the only participation one has in financial matters is to write his requisition and to forward it to the business or purchasing agent. He never knows how much expenditure his requisition entailed, for he never sees the bill. To be sure, at the end of the financial year a report is issued, but the expenditures of a school or department, or of any activity, are so generalized and summarized that for the most part the report furnishes inadequate information concerning detailed costs."

"The statement is made to indicate a further necessary step in order to counteract the price which we pay for the differentiation and specialization to which reference has just been made. By segregating the business matters into one office or department, financial information necessary to the educational offices has been taken away. For effective administration of the superintendent's office, this knowledge must be restored."

The above statements would tend to indicate that the author has no appreciation of the volume of business handled in the business department of a city of the size of Boston. It would appear that he believes that he has discovered a defect in organization or in business processes when the detailed cost of each requisition is not set forth in the financial report for the year, or he is not advised of the cost of each item thereon without making request for such information.

In the city of Boston over twenty thousand requisitions for school supplies are received and handled at the office of the business agent each year. These average over eight items per requisition, exclusive of those for lumber, hardware, drawing and manual training supplies, which requisitions sometimes cover several hundred items each. The value of setting forth the detailed costs of each such requisition in a financial report for the year, or of advising each person making requisition of the cost of each item on each requisition as a matter of routine work and without request, would appear to be at least questionable. As a matter of fact, the heads of the departments using the largest quantities of supplies are in the closest possible touch with the business department as to the cost of such supplies. Individual officers, directors and principals interested in the costs of schools or other activities may frequently be seen in the office obtaining freely all the information they require.

Moreover, the author states that "the report of the business agent compares favorably with the corresponding reports from other cities." The report appears to have answered the purpose of the school board quite satisfactorily, and it would appear that it has answered the purpose of the educational leaders as well, for as a matter of fact not a single suggestion for its improvement has been received from the educators during the past ten years.

The author's statements that "financial information necessary to the educational offices has been taken away" and that "for effective administration of the superintendent's office this knowledge must be restored" are merely in line with his opinion that supreme authority in all matters should be vested in the superintendent. So far as Boston is concerned, all financial knowledge is just as accessible as tho the organization were changed to meet the ideals of the author.

The statement that financial information necessary for any educational purpose is not available is not applicable to Boston.

* * *

But the parts of the paper of the greatest interest are those in which the author attempts to establish the proposition that the estimates should not be presented to the school board until after the superintendent has passed upon and has approved, reduced, eliminated or increased them in accordance with his opinion. It is primarily for the purpose of replying to this theory that I have prepared this paper.

Making appropriations of public funds is and always has been an exclusively legislative function in this country ever since it decided to run its own affairs. "Taxation without representation" was a sufficient cause for revolution and war over one hundred years ago, and if attempted today in any country deserving to be called democratic will undoubtedly cause trouble again.

If the truth of these statements be conceded, it would appear to follow that appropriations for the public schools should be made by the board of education if and when that board is elected by the people who provide the money thru taxation. To clothe the board of education with the authority to levy taxes on a body of citizens who have not elected them for the purpose, if not held unconstitutional by the courts in many of our states, would certainly meet with distinct popular disapproval in the great majority of them.

The appropriation of money for the support of the public schools being, therefore, the function of a legislative body, the board of education, elected by the people, it follows that budget making, or the distribution of the funds for the particular financial year in question is a function of the board of education.

It would not appear to be wholly unreasonable to the average business man to state that under such circumstances the board of education should, both as a matter of right and duty and sound policy, seek and secure information from any person or source which would enable it to act with intelligence and precision.

Moreover, as the making up of the budget constitutes the preparation of the educational program for the entire year, fixing very largely all educational policies for the period, the school board should enter upon the solution of the problem wholly untrammeled, and with the needs and aspirations of every department, activity and proposed extension placed before it without revision or abridgment.

But such is not the opinion of the writer of the paper referred to, nor of many educators of his school of thought. To illustrate his state of mind, I quote the following from his paper:

"The second condition of effective budget making is the general recognition that making a school budget is primarily an educational function and as such should be supervised and directed by educators."

"Because the superintendent has the knowledge and is the only executive officer in the school system who does necessarily possess the knowledge of what the broad, general educational policies are according to which the school system is being developed, the superintendent should not only direct the preparation of the budget, but he should also supervise the necessary reductions and eliminations from the preliminary budget. This should be considered not merely his right but his duty, because such reductions and eliminations undoubtedly directly affect the many educational activities of the school system, for the success of which the superintendent is held directly responsible."

"It is, however, of fundamental importance that the estimates should be prepared according to the educational policies of the superintendent's office, and that the eliminations and reductions should not be made by those who may or may not be familiar with the effect which such eliminations and reductions may have on the educational activities of the school system."

"Within the school department the recognition of this same principle (that educational financing is primarily an educational and not a municipal function) will make the superintendent responsible for the preparation of the budget and for the necessary reductions and eliminations which must usually be made to bring the estimates within the amount of money available."

"If the school budget is to be more than a clerical compilation of original estimates made by scores of people largely on a personal rather than a fact basis, those original estimates must be carefully scrutinized by some one in authority and the school committee relieved from considering clearly unwarranted estimates."

"When the school budget reaches the school committee it should be a well-balanced, detailed, statistical analysis of the estimated expenditures for the next financial year."

"With a detailed statement of expenditures before him the superintendent has a comparatively reliable fact basis on which to judge the trustworthiness and justification of the estimates of his subordinates, and also has a fair basis for approving, reducing, eliminating, or increasing those estimates."

It would appear that in the judgment of the author the school board should be relieved of any consideration of the relative importance of the many educational activities or proposed extensions, and that all such weighing should be done by the superintendent and the results of his thought placed before the school board in the form of a "well-balanced, detailed, statistical analysis of the estimated expenditures for the next financial year."

The author does not go one step farther and state that the school board should approve of this "well-balanced, detailed, statistical analysis of the estimated expenditures" without consultation with the other officers of the board, heads of departments, or other educators, but it would perhaps be perfectly fair to assume that such is intended to be the course of procedure. If they are not to be consulted before the presentation of this statement, there would seem to be no logical reason why they should be consulted afterwards.

Many educators believe that all such advice should come thru the superintendent.

The Boston Survey Committee, in its report to the Finance Commission, discovered that "it appears, however, to be the policy of the school committee as at present constituted to depend upon the secretary, the business agent, and one or more assistant superintendents for advice which ought, in a well organized school system, to be required of their chief executive officer."

It would appear to be the view of this school of educators that not only should the educational and financial policy of the city be served up to the school board in the finished state by the superintendent, and the board as "lay" men must not only accept it under penalty of being accused of "bringing politics into the school board" or of "interfering with the policies of the superintendent," but they are scolded for even asking advice from other sources.

Perhaps the greatest abuses in government have happened thru the autocratic use of power under the semblance of democratic control. It matters little how democratic the form of government may be, provided the authority is centralized in the hands of a person only remotely responsible to the people. In this country we have developed from time to time such conditions. Under pretence of improvement in efficiency, large autocratic powers have been frequently proposed and sometimes granted.

But can any one question the short-sightedness of such a policy and its disastrous consequences if consistently followed, who has made even a superficial study of the causes leading up to the greatest war in all history?

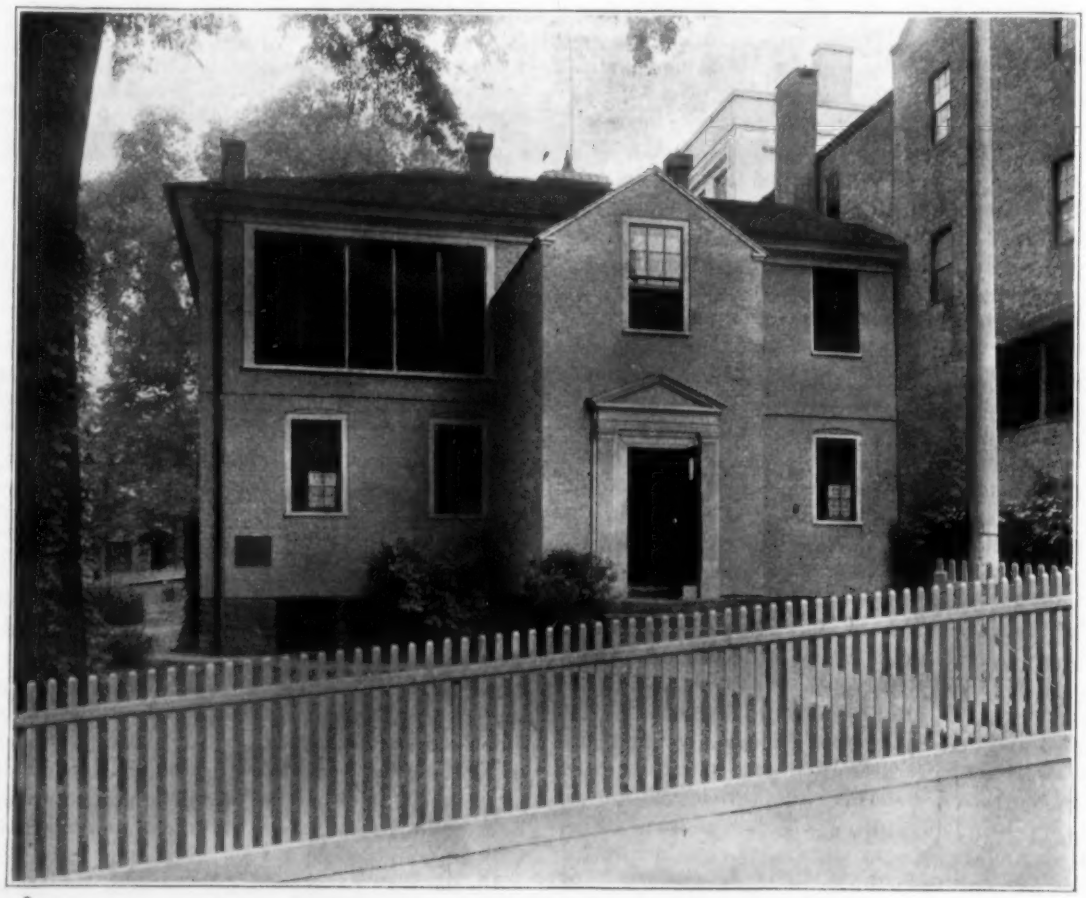
The placing of such large powers in the hands of the superintendent, with only the semblance of control by the school board, is a dangerous step in the direction of autocratic control of the public schools. In many cities the superintendent is a man who may have been elected two, three, four or five years before, and by a board wholly out of touch and sympathy with the people of today in their ideals and aspirations for types and kinds of education.

This school of educators appears to forget absolutely that the members of the school board represent the people who send their children to the schools, who own the schools, and who furnish the money to run the schools. They come directly from the people, elected to carry out the wishes of the people, and accountable directly to the people for their stewardship at the close of their terms.

If we are going to have democratic control of our school systems, such boards should direct school policy; and if they are to direct school policy intelligently they can only do so by a comprehensive study and analysis of the whole financial problem involved in the preparation of the budget by consultation not only with the superintendent but with all other officers of the board and with the heads of all the educational departments, as well as with those citizens who desire to express their views. After weighing the views and opinions of all such persons, the school board itself should apportion the appropriation to serve the educational needs and aspirations of the community.

Erie, Pa. The national committee on capital issues has approved the sale of $275,000 worth of bonds for the completion of two school buildings and the erection of a third structure. It was shown that the city is in great need of the buildings due to the large amount of industrial work and the consequent migration of families with children to this district.

Cleveland, O. Construction work has been begun on a new type of single-story school building. The building which is the work of Architect W. R. McCornack, consists of a number of rooms built about a central court yard which may be used as an auditorium or play space. The cost, per room, is $10,000, or a saving of $6,000 over the usual type of three-story building.



THE OLDEST SCHOOLHOUSE IN AMERICA?

The oldest schoolhouse in Providence, R. I., is apparently the oldest school structure in the United States. The building is still sound and in good repair. It has been in continuous use 148 years and antedates not only the present school system but also the nation itself. It was erected from the proceeds of the sale of an earlier schoolhouse and from subscriptions made by public spirited citizens. The land and the first story were the property of the town while the second story belonged to the 54 subscribers. From 1770 to 1780 the latter used the upper floor as the Latin Grammar School of the Rhode Island College, while the town maintained a Grammar School on the first floor.

The building was used at various times for a school for colored children and in 1908 was converted into the first American open-air school for tubercular children. It is in use as such today.

THE N. E. A. IN PITTSBURGH

Second War Convention of American Educators

The conventions of the National Education Association are so large and so inclusive in the interests which they reach that it is a physical impossibility for any one man to "cover" them adequately or to pass judgment which shall have the semblance of authority and accuracy. The convention held in Pittsburgh from June 29 to July 6, provided for a total of ninety odd meetings and several dozen conferences, all devoted to one or other aspects of the one general problem. No man could hope to report it with any degree of completeness or to reproduce more than a few of the high lights that contrast strongly and unmistakably against the drab of professional "shop" in which schoolmen delight.

Conventions of the National Education Association are rarely battlegrounds to which radically opposing exponents of educational theory bring their heavy batteries of argument and fight out their differences to a decision. They are rather characterized by set addresses and because the assemblies are exceedingly large, general discussions are practically unheard of—unless we except the private discussions in the hotel lobbies. Thus it was that a number of debatable proposals made at Pittsburgh by prominent men, went into the record without a word of public protest or even comment.

The casual observer at Pittsburgh might easily hold that the meeting was a war convention with the educational viewpoint to give it force, but both educators who are interested in education as such, and certain types of teachers who are ever protecting the profession's financial interests, voted the meeting an educational success. And such it was. It certainly proved that the schools are heart and soul in the war and that the pacifism of the Oakland meeting was only theoretical and not real. It proved, too, that the schools will be alive to any changes and adjustments that may be necessary. Many enthusiasts present hoped that the federalizing of education was truly foreshadowed by the recommendations of the commission on the present emergency in education. The opening guns of a great fight for higher salaries for teachers were fired at the convention. The enlistment of the profession thru a campaign for a hundred thousand members of the association was begun. But above all, in every meeting and every address of the convention, there was apparent a spirit of determined service thru which American schools shall be a true "second line of defense."

The General Meetings.

The opening session on Monday afternoon was disappointing, unless consideration is given to the fact that it furnished the theme which was elaborated and repeated with constant variations during the week. President Mary C. C. Bradford foreshadowed, in her annual message, the chief recommendations of the association's commission on the war-time emergency in education and these proposals constituted the basis of the entire week's program. The teachers, said Mrs. Bradford, should consider:

1. The nature of the present crisis faced by the public schools of the United States.
2. The preparation, supply and compensation of teachers.
3. The importance and needs of rural education.
4. A complete program of physical and health education.
5. Problems of immigrant education and adult illiteracy.
6. Compulsory continuation schools.
7. The necessity for a national department of education with the states in strengthening the public schools.

Dr. N. C. Schaeffer, who closed the afternoon's addresses, performed a service for the association which was perhaps unwelcome to the leaders in the movement for reorganizing the association and extending its work. He called rather pointedly for a complete justification of the several proposals of the Owen committee and argued that a drive for new members can be justified only insofar as the association helps to solve the problems in education engendered by the war. He asked whether the association can "help to get more money for the schools?" "keep enough teachers in the second line of defense?" and "enthuse a spirit of service in the hearts of teachers that will keep them in their work despite outside influences?" Mr. Schaeffer disparaged the proposal by which the association is to do all of its business thru a house of delegates chosen from persons actively engaged in teaching. He declared it unfair to disenfranchise members of boards of education who are an integral part of the machinery of the American schools.

Education from the European Standpoint.

Altho the convention learned of educational reforms in the European countries from only one speaker on Monday evening, the meeting proved to be the most soul-stirring of the week. Only one speaker, Mr. Frank Roscoe, was able to speak with authority concerning the radical modification of the educational system of one of the allied countries—England. Mr. Roscoe showed that the compulsory school age in England has been raised since the war began to 12 years of age, and that compulsory attendance at continuation schools up to the age of 16 has been provided. At present Parliament is considering a further extension of the continuation school limits to the age of 18. Considerable changes have been made in the administration of the English schools and a scheme of nationalization has been worked out which increases the authority of the central governing body, improving materially the aid extended thru and to local school authorities.

There was hardly a dry eye in the great auditorium during the soul-stirring address of Suzanne Silvercruys, daughter of the Belgian Supreme Court Justice, who spoke for the government and the people of Belgium. In her bright red dress, gold-colored neckerchief and black peasant cap, this little girl of less than 20 years made a heroic as well as a tragic figure. She typified the spirit of Belgium which has chosen to suffer and to keep its soul rather than to bend to the foe. Her stories of personal experiences at Louvain and Brussels alternately caused the great audience to laugh and to weep, to cheer and to boil with indignation.

Hardly less stirring in their stories of national heroism and self-sacrifice were the addresses of Miss Amy A. Bernardi, a volunteer worker representing the Italian Embassy, and Capt. Paul Perigord, speaking for the French High Commission in the United States.

Honors were divided equally on Tuesday afternoon by Supt. Wm. L. Ettinger of New York City who appeared for the first time on a general program of the N. E. A., Mr. Joseph Swain, who argued for higher teachers' salaries and Hon. F. A. Vanderlip, who spoke of thrift. Mr. Vanderlip hardly referred to thrift stamps as a means of war savings but confined himself to an impressive argument for immediate saving in necessities and luxuries as a means of overcoming the shortage in industrial production. Luxury, he characterized, as a home-made bomb in America which explodes in the trenches in France. Every time we spend a dollar we demand labor which produces the things we buy. To economize is to make labor available for the production of war materials and contributes just so much toward the winning of the war.

The National Emergency Commission.

The high point of the week's general program was reached on Wednesday afternoon when members of the N. E. A. Commission on National Emergency in Education discussed from various standpoints the emergency which has been created thru the war and which the association proposed to meet. Prof. George D. Strayer, who summed up the afternoon program, enunciated the five proposals for reform in American education mentioned by Mrs. Bradford. The only successful solution of the present emergency is federal co-operation. There is at present a threatened shortage of trained teachers which will result at an early date in the lowering of educational standards and which will threaten the intelligence of future generations. It will affect the morale of the nation in the present war period and during the period of reconstruction after the war. The educational system of the country can only be saved by federal appropriations to the states, to be matched by state appropriations. These additional sums are to be largely devoted to increased salaries of teachers, to forms of instruction for the immigrant population, to the elimination of illiteracy and to continuation schools.

The session on Wednesday evening devoted itself to the training for foreign trade representatives and consular agents. Mr. James A. Farrell, president of the National Foreign Trade Council, spoke of the advantages and the necessity of the development of America's foreign trade, and Mr. G. L. Swiggett argued for the training of young America for service as governmental and commercial representatives in the foreign countries with which we have relations.

A New Kind of Fourth.

The association celebrated the Fourth of July without the burning of powder or the display of colored fire. Instead the morning and evening were devoted to two intensely practical sessions, in which the genuine patriotic spirit of a war-time Fourth of July prevailed. At the morning meeting Martin G. Brumbaugh, the schoolmaster governor of Pennsylvania, spoke. Dr. Brumbaugh laid down six standards of service which the schools must render at the close of the present war. "The schools," he said, "must be not only passively but aggressively moral. Its moral discipline must have the full sanction of religion. Any other sanction will make its moral training defective. We want men and nations that will regard a compact or an agreement or a treaty as a thing to be kept inviolate. There can be no code of morals for an individual that is not equally binding upon nations.

"The school must widen the sphere of its influence. We welcome immigrants but we should insist that every immigrant must within five years master the English language. We should vigorously enforce the education of all native-born people. We shall be wise if we establish and enforce attendance in continuation schools which have intimate articulation with industry.

"In addition to training of a liberal sort, each citizen should master a well defined trade. He may never resort to it for a livelihood but he is a better citizen for this special training. It is manifest that there must be more secure tenure and more adequate compensation all thru our school system if the teacher is to meet the newer expectations and needs of the nation.

"We have had forced upon us that we are a wasteful and extravagant people. The school must set a new ideal of national loyalty. We must be taught to serve the nation and not be served by her. We have had a Prussianized American cult in our higher institutions of learning. It must be abandoned; it is not suited to the soul of free America. Autocratic ideals have no place in a democratic society."

At the evening session on Thursday, Dr. Andrew F. West, of Princeton University, argued for the classics in education as opposed to purely and immediately helpful study of present day subjects. The educational values of the war from a psychological standpoint were set forth in a scholarly paper by G. Stanley Hall, of Clark University.

Altho the association was disappointed thru the non-appearance at the sessions of several members of the president's cabinet and of other high government officials who had accepted places on the program, much of the chagrin was

overcome on Friday morning by a thoughtful address from Secretary Lane of the Department of the Interior. Mr. Lane introduced his subject by relating a visit to a little country school in the Hawaiian Islands which he had visited four or five weeks previous and where in an isolated corner, on the slopes of a volcano, he found a teacher and a group of a dozen children fully imbued with the patriotic spirit of America. This little school boasted of a one hundred per cent Red Cross enrollment, an 85 per cent war garden enrollment, a substantial list of war savings contributors and a thoro spirit of devotion to the democratic cause of America. While Germany is being talked to in the language which its government understands, that which comes out of the mouth of a big gun, America must teach itself what Americanism is. Mr. Lane called attention to the fact that there are 5,500,000 illiterates in the United States, 700,000 of whom are within the draft ages. He argued that America must also learn what Americanism is not and in so doing emphasize for herself more strongly what Americanism truly is. He argued for the teaching of the English language to American children, for more self sacrificing patriotism, for more discipline, for more courage, for more devotion to the cause of the winning of the war.

The closing program on Friday afternoon was strengthened materially thru the appearance of Miss Jane Addams, who argued for the assistance which women can give in meeting the industrial and social problems which have recently become so painful.

The Business Meetings.

The business of the convention was conducted without hitch or without any particular feature that caused differences of opinion. The administration of the association has been conducted so firmly and surely during the last few years that there has been no suggestion of independent movements or insurgency among the rank and file of the members. The Pittsburgh convention proved no exception to the rule. There was no politics and the only two proposals that suggested a possible division of opinion fell absolutely flat. The several reports of the committees and of the officers were received with considerable enthusiasm by the active members, of whom less than five hundred occupied scattered seats in the great Soldiers' Memorial Hall. Chairman C. G. Pearse for the Board of Trustees, reported that the association now has an excess of $200,000 in its invested fund, of which $50,000 are in the form of United States bonds. It is notable that Mr. Pearse and his associates have conserved the financial affairs of the association with great prudence and during the past year have taken steps to offset any possible loss in income by a great membership drive.

Mr. John F. Keating, in presenting the annual resolutions, touched upon 24 main points. The more important of these, summarized in brief, are as follows:

The N. E. A. realizes that the first business of the nation is to win the war and pledges its service and is ready to sacrifice itself for the cause of democracy and humanity.

The association rejoices in the fact that the war has demonstrated some of the elements of strength in the schools and recognizes that it similarly has brought out some of the weaknesses.

The association is ready to consider and to recommend such adjustments as may be necessary and commends the commission on a war-time emergency in its work.

It urges that the federal government assume the power to Americanize aliens, to teach illiterate adults and to equalize the state opportunities for the education of children.

The association urges that a government policy be encouraged for the establishment of minimum standards in education, and for financial aid to the states in such a way that local initiative and effort will not be disturbed.

The association urges longer tenure and

DR. GEO. D. STRAYER.

higher salaries for teachers and commends the employment of an expert to promote the establishment of living wages.

The association puts itself squarely on record in favor of the national child labor law, the employment of loyal teachers, instruction in all schools in the English language, national food production thru the schools, the Junior Red Cross, the education of soldiers and sailors in the service, and the re-education of disabled soldiers.

The association favored national prohibition, women's suffrage, the establishment of a national university and a national department of education. It deprecated the possibility of a dual system of schools and urged the conscription of all men and women for selective national service. It commended Congress for submerging partisanship and finally expresses confidence in the administration and in the president.

The applause which greeted President Joseph Swain of Swarthmore College, when he presented his report on teachers' salaries, showed very clearly how close this subject is to the hearts and purses of the teachers. While there was a suggestion on the part of at least one person who commented on Mr. Swain's report, of trade unionism methods, it was clear that it is the purpose of the association to conduct its campaign for higher salaries on a strictly professional basis and to make its plea on the strength of the value of the teacher's service, especially in a war emergency. To the present writer it was not clear that the association thru its committee is attacking the problem in the most sensible way in centering their efforts almost entirely upon the federal government. In the hurly-burly of the vast happenings in Washington, it does not seem likely that Congress will stop very long to consider the cause of the teachers and add to its already overburdened annual budgets several hundred million dollars to be used in the form of teachers' salaries. The project of federal aid to education is so new and its absolute necessity is so unapparent to the average man that it will hardly be given a fair hearing. On the other hand the committee is giving comparatively so little attention to the possible propaganda which it can make thru the state administrations which rightly have in their power the voting of increased grants of money to local school districts that at least this possible method of solving the problem is being largely overlooked. It has taken the better part of a century to build up the theory that the schools are state institutions and it is unlikely that this theory will be overthrown in favor of federalizing education within the period of three or six months as the commission on the present emergency seems to hope.

The Reorganization of the Association.

The proposals of the Owen committee for a reorganization of the association failed to materialize. Supt. N. C. Schaeffer, of Pennsylvania, who had discussed the project on Monday, showed very clearly that the plan of organizing the association with a house of delegates who are to conduct its business and who are to be chosen on a representative basis by the 48 or 49 state teachers' associations, could not be easily applied to the state of Pennsylvania. He showed that many of the county associations in the Keystone state are as large or larger than many state associations and that the plan provides for no representation of school directors. In Pennsylvania the school directors have county organizations and a state association, and to disenfranchise them from participation in the N. E. A. would formally lock out a very important element in the advance of educational interests. It was also evident during the week that the Springer amendments which are to allow for a more democratic form of representation and which are less drastic in their elimination of persons who are not directly teaching, rather found considerable favor from different sections of the country. Mr. Owen for his committee moved that the report be received in 1919 and that the committee be empowered to receive suggestions up to October first, to be incorporated in the report as if that had been presented at the annual meeting.

The association made appropriations exceeding $20,000 to be used by several committees in the promotion of the studies in educational progress. While the meeting accepted these recommendations rather perfunctorily, it should be said that the association would have excellent reason for existence if it did nothing but support these educational studies. More loyal and unselfish service is rendered by N. E. A. committees than by any similar professional bodies in the United States.

The committee on nominations recommended the following persons who were unanimously elected:

President, George D. Strayer, Columbia University, New York city; vice-presidents, Mary C. C. Bradford, Denver, Colo.; M. L. Brittain, Atlanta, Ga.; J. A. Churchill, Salem, Ore.; M. B Hillegas, commissioner of education, Montpelier, Vt.; John R..Kirk, Kirksville, Mo.; Anna E. Logan, Cincinnati; A. S. Cooke, Baltimore; H. R. Driggs, Salt Lake City, Utah; F. L. Pinet, Topeka, Kan.; Mrs. A. B. Purrman, Chicago; Miss Isabel Lawrence, St. Cloud, Minn. Treasurer, A. J. Matthews, Tempe, Ariz.

Pittsburgh proved to be a most delightful convention city. Members of the association who had preconceived notions concerning Pittsburgh as a smoky, dirty city were most agreeably surprised not only by the city as a whole, but in the magnificent Schenley Civic Center, where the meetings were held. Supt. Wm. M. Davidson proved to be an ideal host and Dr. George W. Gerwig attended to every want of the members on behalf of the local Committee on Arrangements. The meeting places were almost ideal in number, size and convenience; the weather was cool and clear and every other physical condition was right. Attendance from outside Pennsylvania numbered less than two thousand but the meetings were always well attended by the visitors and by local people. The entertainment was modest as becomes war times but was the more sincere and welcome.

If the war is to continue for another year and present conditions are to continue to be aggravated, it is questioned whether the association ought to hold the type of convention which it held at Pittsburgh, especially in the number of departmental meetings. It certainly will be wise to bring the leaders together to receive reports and to outline general policies of action, but a call for a general attendance on the part of teachers would seem unwise.

The Department of School Administration

Successful Meeting of Members of Boards of Education

Altho war-time conditions gave the Department of School Administration of the National Education Association a setback so far as attendance was concerned, the recent meeting at Pittsburgh served to prove the essential strength of the Department and its usefulness as a vehicle for the discussion of problems which are peculiar to American school administration. The Department held three successful sessions on July 2d and 3rd, and its program touched upon three or four of the most essential phases of the war problem which confronts school boards. Mr. Albert Wunderlich, vice-president of the Department, presided over the sessions in the absence of Mr. O. M. Plummer.

In his introductory address, Mr. Wunderlich called attention to the changes which the American schools are undergoing as a result of the war.

Mr. Deffenbaugh who read the first formal paper of the meeting departed from a discussion of abstract theories of school administration and devoted himself entirely to a description of concrete changes in city schools. The most important change which has come in city schools, Mr. Deffenbaugh declared, is the reduction of boards of education in membership and a change from election by wards to election at large. In 1902, 25 of 57 cities elected or appointed school board members by wards or districts; in 1916 there were among these 57 cities only nine in which this method still obtained.

A second change in the administrative methods has come from a growing recognition that the schools should be independent of the city authorities and should be considered a branch of the state government in charge of a local activity of the state. Improvement in school board methods has also come thru a reduction in the size and number of standing committees which Mr. Deffenbaugh characterized as a sort of vermiform appendix, with no useful function and often the cause of internal trouble. In a study of school administration in the smaller cities, 48 different kinds of committees were found several years ago, and some boards of education had as many as fifteen committees each headed by a different member of the board. Mr. Deffenbaugh declared that school boards should act as units and that committee work, especially when committees have authority to act, destroys the unity of purpose and policy of the board.

A fourth point of growth in city school administration has come from the development of the superintendent as an expert. School boards are adhering more and more to the principle that they should legislate and should determine general policies while the superintendent should execute in all matters affecting the schools. The employes of the board should be subordinate to the superintendent and should report to the board thru him. By this arrangement responsibility is definitely fixed and the board can demand results. The new type of superintendent is not a mere pedagog but a practical, scientific administrator who is able to show what the schools are accomplishing and how the funds are being used. He is in fact a man of large affairs in charge of a large work for the community. In closing his paper, Mr. Deffenbaugh pointed to the broadening of the school curriculum, the wider use of the school plant, the tendency to lengthen the school year and similar improvements which have come in the school machinery.

Dr. Gerwig's Address.

The second paper of the morning was read by Dr. George W. Gerwig, secretary of the Pittsburgh board of education. Dr. Gerwig urged that war-time policies for the schools must be determined by agreeing upon the most urgent needs and the filling of these in the order of their importance. We must focus on fundamentals and must subordinate them to the crying need for money. First and foremost, we must abolish adult illiteracy and must teach everyone English.

In determining war-time policies boards of education must first of all, adopt a financial policy that will guarantee abundant funds for education and an educational policy that will make illiteracy impossible. A nation can refuse or neglect to provide the necessary means for education, but no nation can long escape the consequences of such refusal or neglect. "The nation shares in the benefits of schools well conducted, and likewise suffers when the product sent out is inefficient or poorly equipped. Errors made by an entire nation are sometimes costly and sometimes tragic. But errors of ignorance, made by an entire nation, are both costly and tragic.

"Personal, municipal, school, state and national expenditures are increasing at a rate absolutely unheard of in the past. The demands in every department of life increase in speed and in urgency far faster than the apparent ability to meet them. All past experience teaches that a time is bound to come when the process will be reversed, when the cost of easily acquired, expensive habits, will run beyond the income. Municipalities everywhere are facing rapidly climbing expenditures, with fixed tax levying limits, with limited bonding capacity, with a certainty that interest must be paid and that bonds must be redeemed. Nations are all borrowing to the verge of bankruptcy. The vicious circle of increasing costs and increasing expenditures continues, the situation apparently getting worse and worse. It would be perfectly natural to have a brain storm and to become panic stricken in anticipation of the day of reckoning which is bound to come.

"Fortunately, however, several considerations come to the rescue, each of which is a tremendous tonic. In the first place America is recognizing, at last, that the things we are fighting for are of infinitely greater value than any possible cost may be and that all our other possessions would be as dust and ashes without our ancient ideals of liberty. In the second place we see that we have been criminally, individually and nationally wasteful and extravagant, and that we can readily, without serious discomfort, indeed with positive benefit to health, save enough to share generously with our less fortunate neighbors, and each have abundance. In the third place, and most important of all, we are beginning to recognize that we are developing and releasing unknown and untold resources of co-operative power and energy, and that, as William James tried to teach us long ago, and a greater teacher centuries before, that there are untapped reservoirs, abundant for every need of mankind, as exhaustless as the widow's cruse of oil, if only used for unselfish purposes."

Dr. Gerwig completed his paper by outlining ten methods of approach which should be utilized in a campaign for the Americanization of every child and of every adult in the United States. He called for especially the utilization of day and evening schools, social centers, newspapers, trade and industrial schools, fraternal organizations, and the training of girls and women.

"Preparedness," said Dr. Gerwig, "is a school problem. A democracy is doomed to destruction which consents to remain inefficient.

"There is no panacea in the dictum that the majority shall rule. A majority may rule in Russia to its utter undoing. The panacea consists in making and keeping the majority fit and willing to rule for the greatest good of all the people.

"A nation's destiny is finally fixed by its training. Nations are learning the art of imbuing their people with certain chosen national ideals. The important thing is the type of ideals to be instilled. The supreme function of the schools is to discover, clarify and develop high ideals, as well as to find and train the ability to convert these ideals into realities."

The State as the School Unit.

Dr. Thomas E. Finegan, Deputy Commissioner of Education for New York State, followed Dr. Gerwig with a discussion of the state as the agency thru which the schools must operate and from which boards of education derive their powers. City schools are not a department of the city government under the laws of any of the states. They cannot and must not be made departments to be controlled by the city authorities as the police and street departments are controlled. They are instruments of the state, working in the locality by the power delegated to them by the legislature. Dr. Finegan cited the case of a board of education in one of the eastern states, where the local authorities considered the schools a part of the political spoils and where the neglect of the board of education to elect teachers was readily solved by the application of the principle that the schools are state institutions. It was possible here for the state department of education to prevent the closing of the schools, by appointing teachers and conducting the schools until the board of education had learned the error of its ways. The laws of the several states make it the duty of every locality to supply the personal staff necessary to operate the schools. When the community fails to meet these obligations it is the duty of the state to take action so that no child may be deprived of the privileges which the state constitution guarantees in the matter of education.

As agents of the state local boards of education have absolute authority over the school funds, it is highly desirable that they determine the amount of moneys to be raised by taxation and it is essential that they dispose of these funds as they find it necessary. No one acquainted with school conditions, in Mr. Finegan's opinion, would submit to the absolute control and the jurisdiction of the school system by local municipal officers.

Dr. J. George Becht, who followed Dr. Finegan, discussed the "Americanization of Foreigners as a War-Time Duty." He pointed out that we must utilize the foreigner's present environment and his former environment and we must bring to bear every element of the culture of the native country for imbuing him with American principles.

War-Time Policies of the Government.

Dr. P. P. Claxton, United States Commissioner of Education, closed the morning session with a very matter of fact and complete statement of the government's war policy for education. Dr. Claxton described in some detail, the steps which the government is taking for the education of men in military service and for the re-education of men who are wounded. He declared that it is the policy of the government to interfere as little as possible with education and that it is in fact the desire of the chief men in the administration to keep the schools at the highest point of efficiency. He declared that the government recognizes that its first duty is to win the war and that a second and very sacred duty is to prepare our people to live during the war and after the war. The federal government is encouraging especially the continuance of boys and girls in the high schools and the enrollment of young men in engineering and scientific schools. While it is the policy that all school building activities during the war shall be curtailed to those which are absolutely necessary, it is not the purpose of the government to prevent the erection of buildings such as are absolutely essential to the maintenance of the schools at their present efficiency or in any way to prevent children from attending at full time.

The Second Session.

The second session of the department limited itself entirely to school board problems. Mr. Edward L. Taylor, president of the board of education at Williamsport, Pa., opened the meeting with a very thoughtful paper on "School Finance as a War-Time Problem." Mr. Tay-

(*Continued on Page 63*)

PATRIOTISM AND POCKETBOOKS

Conserving Coal Helps the Country and Cuts the Cost of Heating; Practical Suggestions for Schools

Harold L. Alt

There has been a profuseness of discussion during the past year on the all important subject of Coal. Beyond argument the facts were that coal was high in price, poor in quality, scarce in almost every locality and absolutely impossible to secure in some. For a total of approximately a week's time every industry east of the Mississippi River ceased its operations unless its activities were regarded as directly essential to the immediate conduct of the war. Among other types of buildings many schools closed for lesser or greater periods; educational time was lost never to be regained; an economic loss was suffered beyond calculation. What is to be done about it, during the winter to come, if conditions grow worse instead of better?

There are two ways of conserving coal; one, by preventing its waste, and the other, by eliminating its use (or the use of heat) in certain places where it has previously been considered as desirable. As an example of the first classification there is the matter of using more efficient heating apparatus so as to give the same heating effect with the consumption of a less amount of coal, while an example of the second is found in the cutting off of heat in street cars and trains where previously it was considered a necessity. The first method of saving is good; it always is desirable from a financial standpoint and inconveniences no one. The second method may be justifiably desirable in cases of extreme and sudden emergency but its use will give rise to other discomforts and, in many cases, will result in evils of such a serious nature as to be kept only as a means of *last resort*, rather than as an *immediate expedient* to be put into practice on the slightest provocation.

Among the many suggestions on how to get along on less coal is included the regular yearly discovery that salt mixed with ashes will reproduce (?) the combustion and heat originally contained—and a good many people who read this every year, *believe it*, and go and buy salt, hoping by some alchemist's spell to change the ashes back to carbon.

Probably the most dependable set of instructions for coal conservation was that issued by the Illinois Chapter of the American Society of Heating and Ventilating Engineers. While prepared primarily for the small coal consumer there are some points contained therein which would be profitable for many school janitors to heed. The rules briefly are as follows:

Soft Coal.

1. Thoroly clean flues and passages of boiler or furnaces at least once a day.
2. Steam boilers should be blown out under pressure to remove grease and dirt. This is very important and should be done at once by an experienced man. Hot water plants should have water renewed in fall before starting heating season.
3. Clean base of chimney and smoke pipe once a year.

Method of Firing.

1. Fire often and lightly, keeping grates fully covered.
2. Do not spoil fire by stirring it around or mixing it up.
3. Use slice bar under fire bed on top of grates, lifting only enough to break or crack open the mass. Keep fire free from clinkers.
4. In large boilers or furnaces use the alternate method of firing; first, one-half of grate, and next, firing the other half. This is done to have a bright fire to assist in burning the gases from the coal just fired and to make heat until the fresh coal ignites.

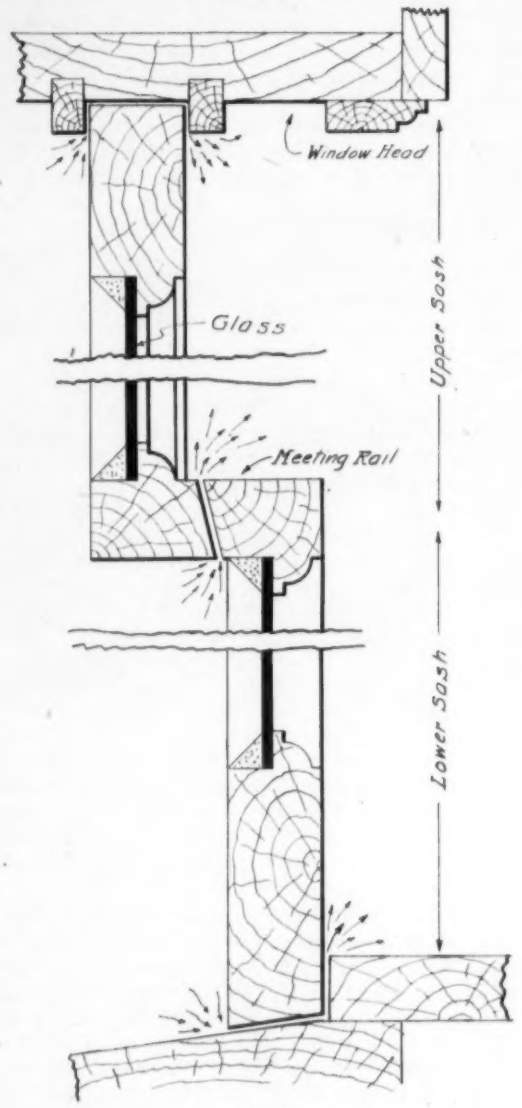


Fig. 1.

5. Don't smother your fire.
6. Use the smaller prepared sizes of coal if possible. If you cannot get the small coal, break the large coal into small lumps. Wet all soft coal before firing.
7. The best way to fire round boilers or furnaces is to get the house warm by firing lightly and often. Then fill fire pot full of wet coal. Next take a piece of pipe or broom stick and poke a hole down through the fuel bed to the grate. Carefully withdraw and leave hole in fuel bed. Check off the draft so that it will not burn too rapidly. This hole soon will carry a large blue flame, which is gas driven off from the fresh coal. If this method is followed, the gas will not be lost up the chimney.

Ashes.

1. Don't shake grate violently. It wastes coal.
2. Keep the ash pit clean.
3. Never allow ashes to get within six inches of grate.
4. Remove ashes from last shaking before shaking again.

Draft.

1. Be sure your chimney is large enough, high enough and absolutely tight.
2. Do not allow any connections to be made to the heating chimney, excepting the heating boiler or furnace alone.
3. Regulation of draft is very important in saving coal and should be attended to at once by an experienced man. If you cannot regulate your draft be sure to call for assistance.
4. The draft to ash pit should not be open any more than necessary to maintain the desired temperature.
5. Do not open ash pit door to increase draft. Use draft damper under grate provided with boiler or furnace for this purpose.
6. Check draft must not be open unless draft damper under grate is closed.

Hard Coal.

1. Thoroly clean flues and passages of boiler or furnaces at least once every week.
2. Steam boilers should be blown out in same manner recommended for soft coal. Also clean base of chimney in same manner.

Method of Firing.

1. In using anthracite coal a bright fire should always be kept if you wish heat. In building up a fire use a small quantity often with good draft until the fire pot is full to the center of fire door. Draft then can be checked to hold the heat desired.
2. A hard coal fire should never be disturbed by stirring or breaking up with a poker.
3. Remove clinkers, if any, thru grate or clinker door.
4. Use size of coal recommended by maker of boiler or furnace. Don't wet hard coal.

Ashes.

1. Rules same as for soft coal.

Draft.

1. Rules same as for soft coal.

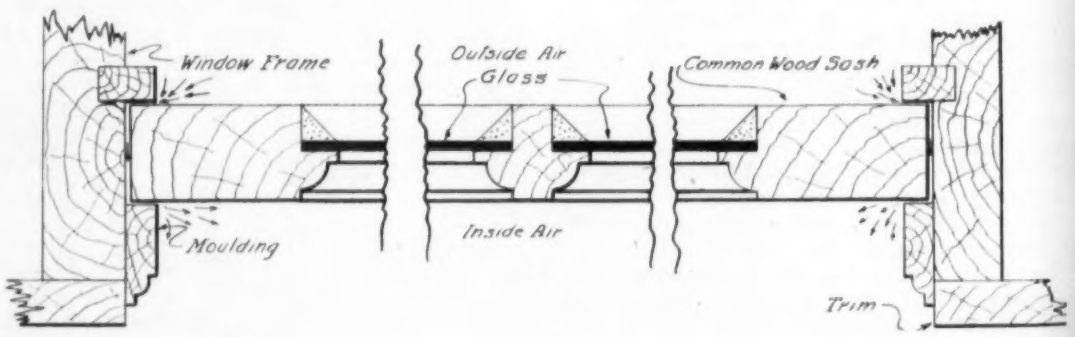


Fig. 2.

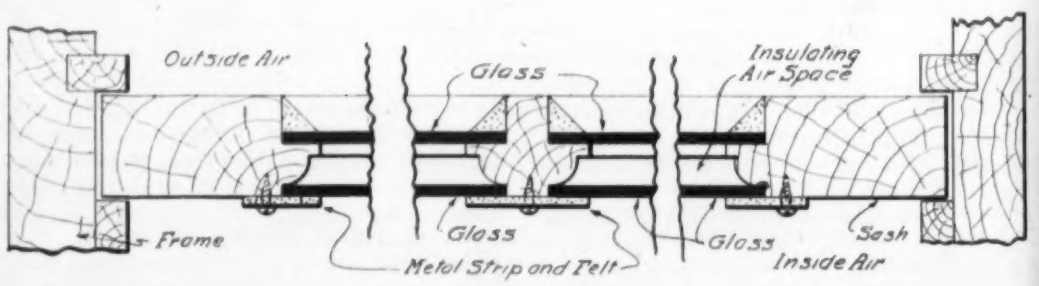


Fig. 3.

General Remarks.

1. Cover boiler and pipes with asbestos or other insulation; also weather strip your windows and doors or stuff cracks with cotton.
2. Keep your room at 68 degrees (best heat for health).
3. Heat only the rooms you use all the time.
4. Close bedroom doors when windows are open and shut off radiator.
5. When any room is kept at a lower temperature than balance of rooms keep door closed.
6. Protect a hot water radiator in room when windows are open by throwing a blanket or rug over radiator. Radiator may then be shut off without fear of freezing.
7. Use hot water sparingly, as every gallon of hot water wasted means loss of coal.

These regulations, with two exceptions, all belong in the desirable classification involving the furnishing of the same amount of heat by more efficient means and at less cost and coal consumption. The two exceptions are No. 3 and No. 7 under "General Remarks," the first advocating the keeping cold of rooms not constantly in use and the last a reduction in the use of hot water. Of course hot water should never be wasted, but is it desirable to cut its use any below this actually required amount?

Fig. 4.

Another list of economies which applied more particularly to schools was presented at the annual meeting of the American Society of Heating and Ventilating Engineers, in January of this year. It enumerates five ways in which heat is lost by unnecessary and superfluous demands as follows:

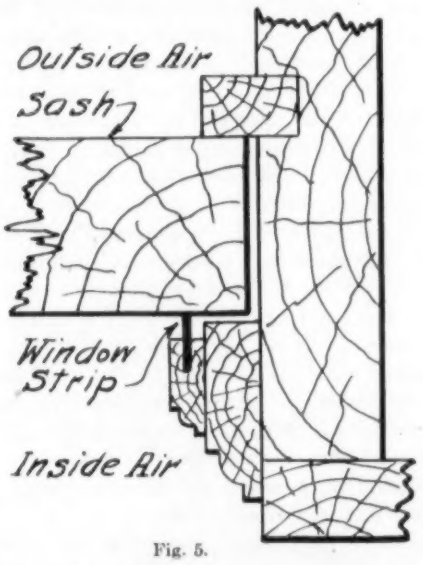


Fig. 5.

"First. The elimination of mechanical ventilation during the early fall and late spring months when window ventilation will naturally be used anyway and may be used with almost as good success as mechanical ventilation."

"Second. The cutting off of heat in corridors, stairways, courts and all such places during much of the heating season and except in coldest weather, thereby not only saving a great deal of coal, but leaving these spaces in a much more healthful and exhilarating condition."

"Third. By consolidating the activities in a building so as to keep the heat shut off of all sections of same, except when actually required for use."

"Fourth. By eliminating such activities as require more heat than they are worth."

"Fifth. By the adjustment of the human element, so as to have the coldest natured occupants of a building in the warmest sections, so as to prevent the overheating of the whole to satisfy a few."

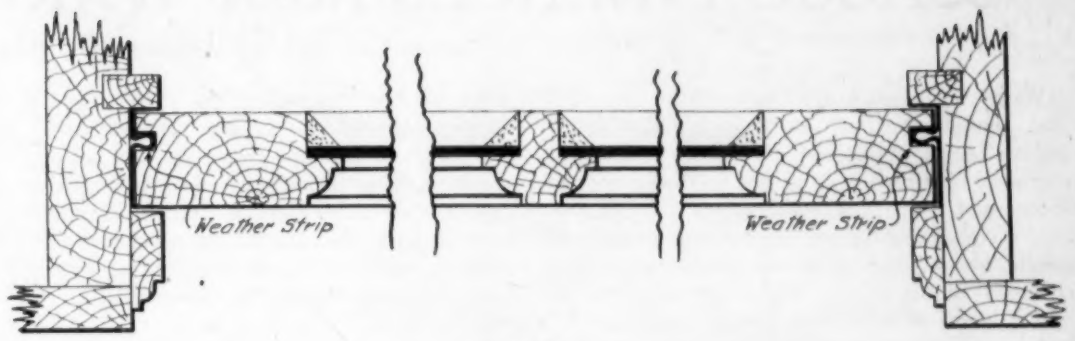


Fig. 7.

The firing of the boilers is claimed to be regulated so as to produce the best results if carried out as follows:

"Fires are banked in one corner of the furnace near the bridge wall and cleaned in the morning before starting by pulling all of the dead ash and clinkers out on the floor."

"The live coals are then spread over a clean grate and very lightly, but evenly, covered with fresh coal. As soon as this has burned thru, a heavy layer of fresh coal is spread on and this process continued until the fire is built up, as rapidly as possible, to the most economical thickness."

"After this the fire is carried as near this thickness as possible and shaken often enough to keep the ash pit bright."

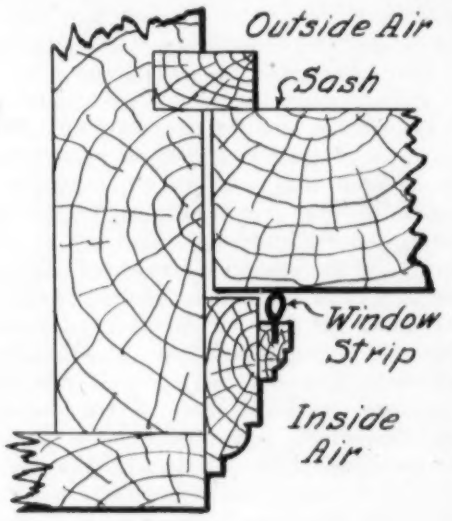


Fig. 6.

"Fires are cleaned at noon, and again at the end of day school in every school plant."

But suppose the boiler room is *already* operating as economically as possible, suppose the heating system to be one of *high efficiency* carefully run, suppose all the other economies previously mentioned *are* and *have been* put into practice. *What then?*

Consider for a time the other end of the question—not how to produce more heat at less cost and not how to get along with less heat at less cost, but the matter of *keeping* the heat after it *is* produced.

The burning of coal under a boiler produces a certain amount of heat. Part of this heat is absorbed by the steam and carried to the radiators where it is given off into the room. From the room it is passed off into the outside air thru the walls, windows, and other means of transmission.

As may well be supposed the windows are the weakest point in building construction as far as retaining heat is concerned. In fact the heat loss thru glass is about four times as high as through a 12 inch brick wall. If the average classroom is assumed to be proportioned according to the recommendations of the Michigan State Department of Health the ratio will be as follows:

Floor Area=15 sq. ft. per pupil.
Air Space=300 cu. ft. per pupil
Glass Area=20%, or over, of floor area

Then for a 50 pupil room there will be required

Floor Area=750 sq. ft.
Air Space=15,000 cu. ft.
Glass Area=150 sq. ft.

Assuming the room approximately square, the dimensions would be 25 x 30 = 750 sq. ft. and the height 15,000/750 = 20 feet. The average schoolroom probably will not run over 15 feet in height so that the outside wall will be

30 x 15 = 450 sq. ft.
Glass = 150 sq. ft.
Net Wall = 300 sq. ft.

Taking the heat loss on 1 sq. ft. of wall as unity with glass at four times as much the comparative losses are

300 sq. ft. net wall x 1 = 300
150 sq. ft. net glass x 4 = 600

Therefore, on an average schoolroom the glass loss is approximately double the wall loss. Can such losses be diminished?

To this can be answered unhesitatingly, "Yes." How far such reduction in heat loss can be desirably carried depends upon the saving effected. The simplest way to cut down such loss is by the use of double glass so as to retain an insulating layer of air against the inner

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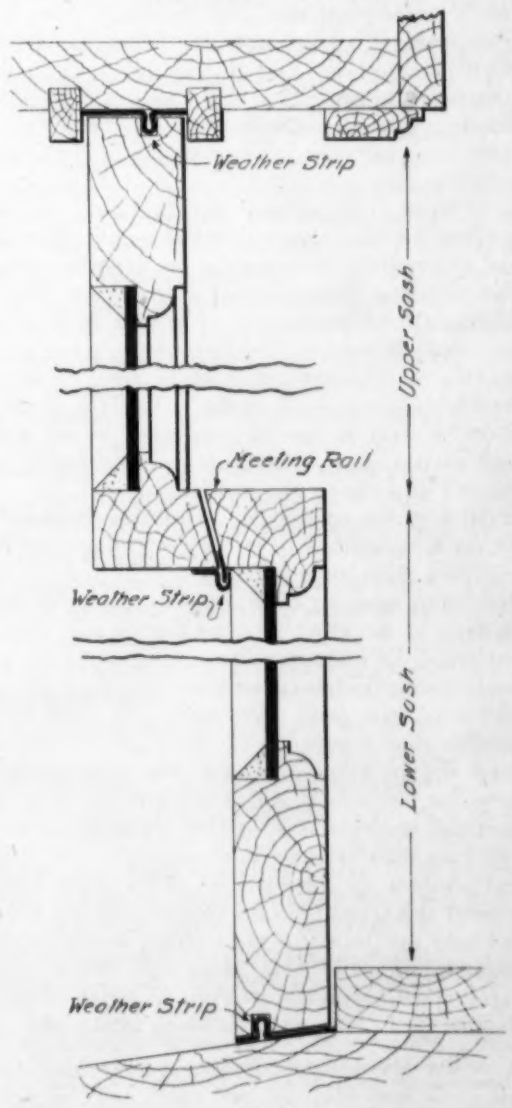


Fig. 8.

SCHOOL FINANCES AS A WAR-TIME PROBLEM

Edward L. Taylor, Williamsport, Pa.

With the demand and necessity on one side that the standard of efficiency of the public schools be maintained, that teachers' salaries be increased in proportion to the increased cost of living, and to the services rendered, that all necessary equipment be provided for teachers and pupils, and on the other side that the strictest economy in all public affairs be observed, the school board member is indeed confronted with a serious financial problem in these unusual times.

As once said by President Cleveland, "It is a condition and not a theory that confronts us," and it is a condition that must be met by school authorities in a broad-minded, patriotic manner with a determination that the efficiency of the public schools shall not be lowered at the most critical time in the history of the world, at a time when it is of vital importance to the very existence of our nation that the youth of our land be trained as loyal and useful citizens in order that they may not only give valuable assistance to their country during the progress of the war, but may also be of the largest possible service in the great readjustment that must come after this war, when the greatest catastrophe in all history is finally ended thru the defeat of "German Kultur" and all the horrors for which it stands.

It will, of course, be admitted that the first requisite for efficient schools is efficient teachers and we cannot, in the face of present conditions, retain many of our best teachers, unless we provide for salary increases sufficient to cover at least the larger part of the increased cost in living expenses. All professions are, of course, affected by the increase in prices of commodities. The teachers in the public schools, however, are placed at a greater disadvantage than most professional men and women as they seldom have an opportunity to obtain income in addition to their salaries and unless these are increased in proportion to the rise in prices, the teachers and those dependent upon them face a serious curtailment in their supply of the necessaries of life.

If we do not perform our full duty in this matter, we must expect that the supply of teachers will rapidly decrease, for we must recognize the economic principle that just as competition among all the professions is greater in time of business depression, because the certainty of income is attractive, just so in time of great business activity and rising prices the professional income is less attractive and young men and women engage in trade or manufacturing instead of entering the professions.

All over the country we are losing thousands of our men, and many of our best women teachers, thru their entrance into the United States Service or some organization connected with the conduct of the war. This we cannot and would not avoid. We commend the patriotism of these noble young men and women, but their going makes it still more necessary, still more important that thousands of other good teachers must not be allowed to abandon their professions for business if a fair recognition of their financial needs on the part of those in control will keep them in the schoolrooms.

A number of the teachers of our city have entered the United States Service, but we have had very few leave for the purpose of obtaining better salaries elsewhere, altho the salaries paid were rather below the average in cities of our class in 1914. Since the outbreak of the war in 1914 we have increased the salary list nearly 35 per cent of the average amount paid our teachers and in consequence of this action, our teaching force feels that the Board of Directors and the Superintendent of Schools have endeavored to treat them as fairly as conditions will permit, resulting in an excellent spirit of cooperation together with enthusiasm and efficiency.

You may ask how we have found it possible to increase our average salary 35 per cent in four years. The answer is very simple. We have increased the tax rate 40 per cent in the same period and I am glad to say that while there has been some criticism of this large increase, the great majority of our citizens recognize the fact that the standard of efficiency in our schools cannot be maintained upon the financial basis which existed before the war.

We should have a much larger appropriation from the State for our schools, but I regret to say that Pennsylvania is still far behind many other states in this respect. In our city where it costs just about $50 per year to educate each pupil, we receive from the State each year just a little more than $5 for each pupil, or about one-tenth of the cost to the district. Altho the corporations and individuals of our city pay to the State each year in taxes more than one-half million of dollars, yet the amount returned to us is a paltry sum for the great cause of education and compels local real estate other than that owned by railroads and public utility corporations to bear ninety per cent of the maintenance cost of our schools.

Altho the increase in the teachers' salary list is the largest item of our increased expenses, we have found that there has been an enormous increase in the cost of all kinds of supplies and equipment. Our coal bill for 1917-1918 shows an increase of 108 per cent over the year 1913-1914. The advances in the cost of all kinds of stationery have been nearly as large, but by practicing the most rigid economy in the use of supplies we have saved considerable money in this item. The cost of minor repairs to buildings has shown a big increase as far as material is concerned, but we have cut the labor cost in two compared with four years ago, thru the election of a superintendent of buildings, who is a thoro mechanic and who either makes the repairs himself, or has them made by competent workmen under his direction. All improvements to buildings that can be postponed without affecting the efficiency of the schools are withheld for more favorable conditions.

The financing of new school buildings under present conditions is also a great problem for school authorities. The city that does not need a new building either to provide for increase in the school population, or to take the place of an obsolete, perhaps condemned building, is indeed fortunate.

In our city we built a very good high school building four years ago at a cost, including equipment of approximately $300,000. We had planned to use the old high school building for either a grammar school or a junior high school, but it was destroyed by fire just before the new building was ready for occupancy.

We then proposed to build two new buildings, one in a section of the city which has had a rapid growth and where we now have several grade schools located in store rooms in business blocks and in a church, rooms that are unsuitable for school purposes and without playgrounds. The second, in another part of the city to take the place of an overcrowded and antiquated building which does not possess any of the features of a modern schoolhouse and cannot be made as safe as desired.

We asked our citizens to approve a bond issue of $300,000 to provide these buildings and as our people are always ready to sustain the board of education in its efforts to improve school facilities, their approval of the loan was secured at the election held in November last.

It took some time to conclude all of the legal proceedings incidental to the loan and we found that in the meantime the price of labor and material had advanced to such an extent that the buildings which preliminary plans indicated could be built for $150,000 each, would now cost considerable more. In other words it had become impossible to obtain two buildings of the construction and capacity needed for the amount we had been authorized to expend. Even tho we had a larger loan authorized there would still be obstacles to overcome, for while it might be possible to obtain the approval of the Capital Issues Committee for at least one of our needed buildings, it is very doubtful if that committee would approve the erection of both of them.

In addition to this the condition of the bond market is such that altho municipal bonds have a high standing just now as investment securities because of their exemption from taxation, they cannot be sold unless the interest rate is higher than loans made for the purpose of making public improvements can be reasonably loaded. If the war continues much longer, it is doubtful if there will be any market for new securities except government bonds, or if the offering of any other securities will be permitted. The government must monopolize the investment market if necessary as the primary business of the country at present is to win the war and that as promptly as possible.

And of still more importance than the financial problem of new school buildings just now is the necessity for observing the demand for the closest restriction of consumption for private, State and municipal purposes of labor and raw material. Paul M. Warburg at a recent meeting of the National Conference on War-time Economy, held in New York, and called under the initiative of the Academy of Political Science and the Bureau of Municipal Research, said:

"Individuals will save in small things when State and city governments demonstrate their determination to save in the great ones. No country has any chance for victory that refuses to organize its entire population so as to concentrate its thoughts and efforts upon winning the war. The Government has first call on our sons, our services, our goods, and our savings; it is entitled to every ounce of our material and man power. In time of war nothing is more dangerous than delay. The present emergency requires that the country be aroused to a thoro consciousness of the fact that whoever uses material, credit, labor, or transportation unnecessarily is placing a handicap upon his Government in its progress toward victory."

In view of such a statement made by a man recognized as an authority on economics, who is in close touch with governmental affairs, it seems imperative that the building of new schoolhouses be postponed if possible.

And yet it will probably be many years before schoolhouses can be constructed at less than such buildings would cost today. Mr. Replogle, Government Director of Steel Supply, recently made an interesting statement bearing upon this

(*Concluded on Page* 61)

Address delivered before the Department of School Administration of the N. E. A., at Pittsburgh, Pa., July 1-6, 1918.

Planning the War-Time Schoolhouse

IV. The 8-Room School

William Draper Brinckloe

Yes, I reckon we all agree that the one-story school is the ideal type. But, unfortunately, it is also the most expensive type—twice as much roof as the two-story arrangement, twice as much foundation, a third more fuel, and nearly twice as much corridor-space! The only offset to all this extra cost, is the stairway; and we generally need basement and entrance stairs, anyhow. So, in these war-time days, with fixed (?) charges doubling overnight, the worried school board must make its scanty appropriation go as far as possible; and that usually means cutting out all thought of one-story schools, especially when an eight-room building is to be planned. In some special cases, a cluster of

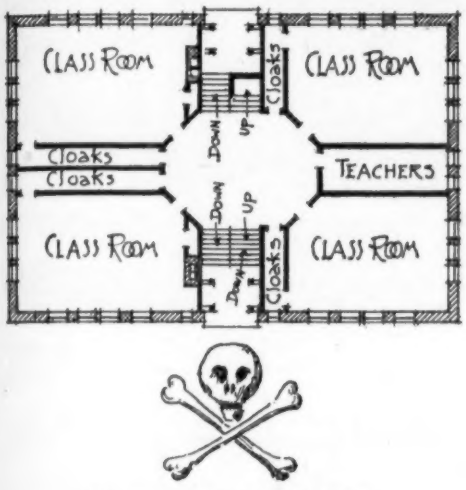


Fig. 1. Collinwood, Ohio, School.

little one-room frame units may be built very cheaply and satisfactorily; the Glendale school in Arizona, shown in the February School Board Journal, is an excellent example. But generally, land is too costly for this sort of thing; and the board turns to the only possible scheme—two stories, and full basement.

Let's look at figure 1 a moment; the first-floor plan of a typical 8-room school.—Pretty good, eh?—You have seen lots of other schoolhouses arranged on just about that scheme?—Well, this was the Lakeview School, at Collinwood, Ohio; *173 children were burned to death on that floor!*

Listen: the building was exactly the usual sort; brick walls, with frame interior construction, and a steam-heating plant in the basement. No doubt the builders fancied they had taken all possible safety precautions; for there were two stairways, the doors were double, opening outward, and iron fire-escapes were in place (I am not quite clear on this last point; but it makes no difference. The fire-escapes would not have been used in any event, as you will see). A fire broke out in the basement, from a steam-pipe touching a wooden beam; a cloud of smoke puffing up the open front stairway, gave warning of the danger. The fire-drill gong clanged harshly; the teachers sprang quickly to their posts at the classroom doors, and the first-floor pupils marched out in orderly fashion. But the smoke was getting thicker; the little folk, waiting in trembling silence on the second floor, could stand the strain no longer. The teachers stood bravely guarding the hall doors; but the children, breaking into wild panic, rushed madly out thru the cloak-rooms and down the back stairway. One leaf of the outside door stood open, the other leaf was bolted; the crowd jammed into the narrow space, and stuck there, a solid wedge of human bodies. . . . . The flames surged up the front stairs, swept across the hall, *down the back stairs;* . . . . help arrived, and the door was torn down; but too late!

This could not happen in your school? Your cloakrooms do not open on the hall—and you have better discipline? Perhaps! But remember—regular regiments, drilled steadily with iron discipline for years, have often been known to go all to pieces when first they came under fire; and my little daughter tells me she has had *two fire drills this season.* . . . .

"The American people have given far less thought to the protection of schools and their precious contents than has been given to manufacturing plants," says the latest School Bulletin of the National Fire Protection Association. Then follows much valuable data on fire-drills; —that is outside the scope of my subject, however. But there are some extremely good "safety-first" rules; here is the substance:

A. Sufficient *fire-proof* stairways (*not* open fire-escapes) to empty the school in three minutes.

B. All stairways enclosed on each floor with fireproof and smoke-proof partitions; wire-glass, reinforced concrete, brick, or something similar.

C. Stairs to be from four to six feet wide.

D. Doors from stairways to halls to be fireproof, and self-closing; *never* hooked back while school is in session. This last applies above all to the basement doors.

E. All cloak rooms to open only into classrooms (except, of course, where the cloak rooms can open directly out-of-doors).

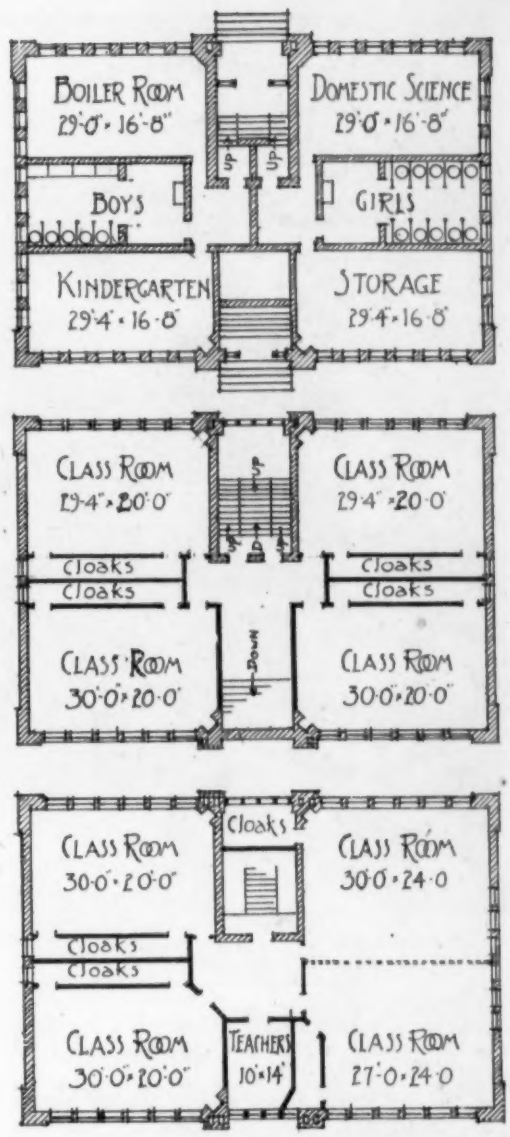
F. The building to have at least two exits, remote from each other.

G. Self-releasing catches on both leaves of exit doors.

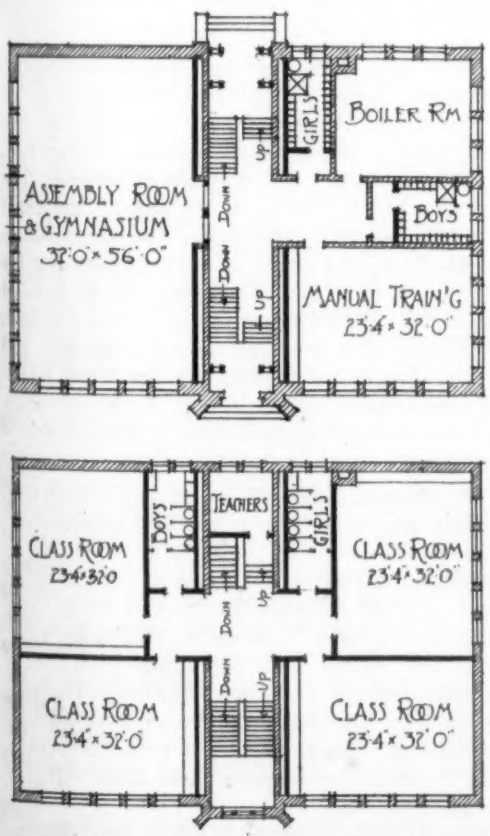
H. Stairway terminals to be free and clear of all obstructions, and not narrowed down in any way.

(There are also many excellent minor rules that I haven't space to record; but you can get a copy of the School Bulletin by sending ten cents to headquarters of the National Fire Protection Association, 87 Milk Street, Boston, Mass.)

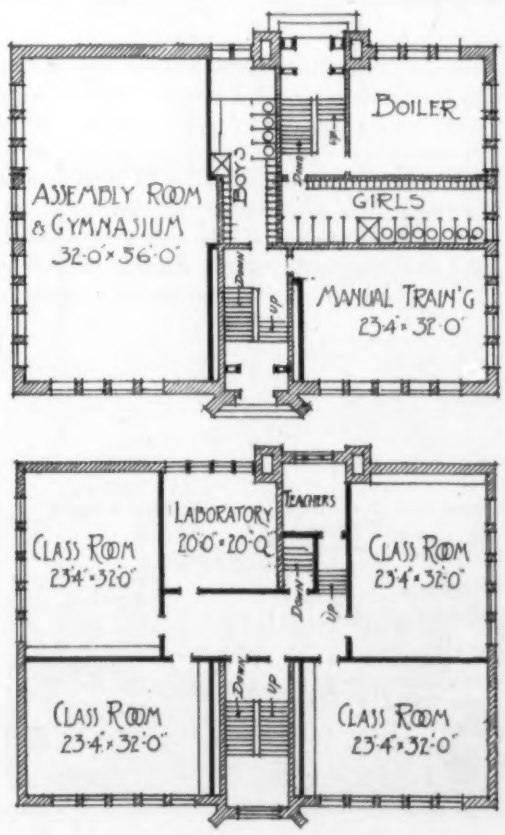
Now, let's turn to figures 2, 3 and 4; the floor plans of an eight-room primary school in a country town. The total cost in 1912 was a



Figs. 2, 3 and 4. Basement, First Floor and Second Floor Plans, Centerville School.



Figs. 5 and 6. Basement and First Floor Plans, School, Rinard, Ia.



Figs. 7 and 8. Basement and First Floor Plans, School, Rinard, Ia.

NORTH MAIN STREET SCHOOL, SPRING VALLEY, N. Y.

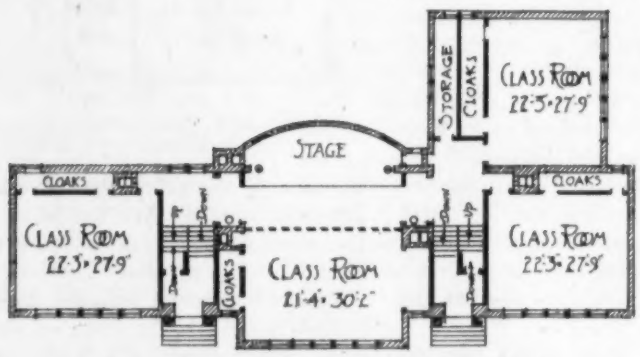


Fig. 9. First Floor Plan, North Main Street School, Spring Valley, N. Y.

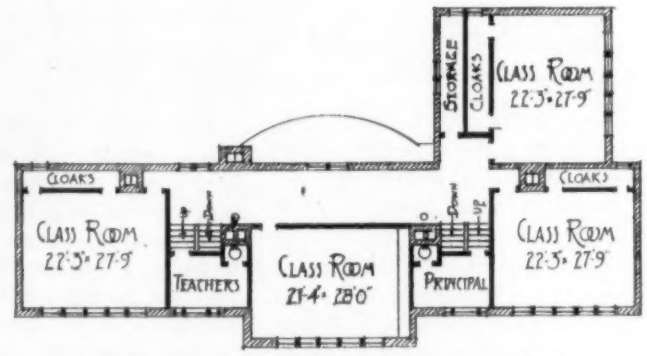
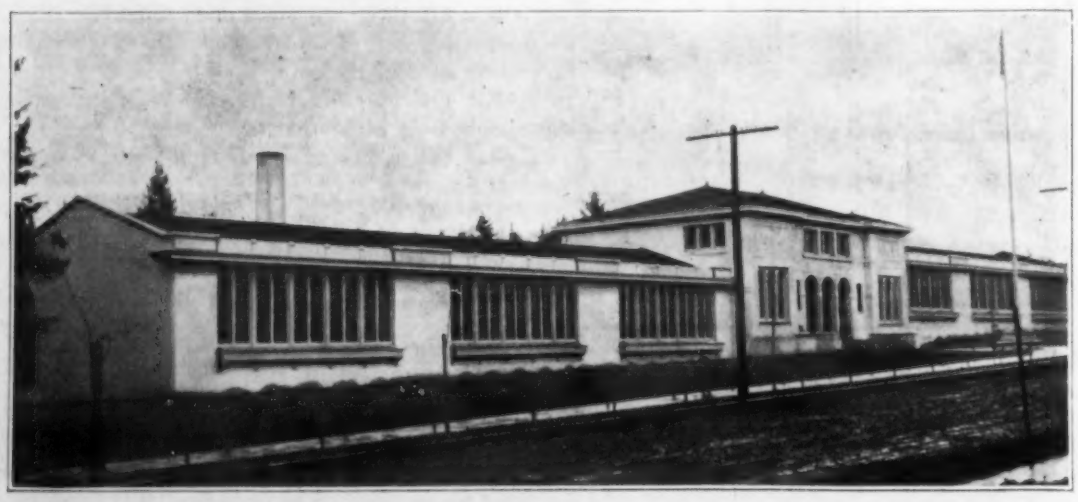


Fig. 10. Second Floor Plan, North Main Street School, Spring Valley, N. Y.

little over $17,000; and the school conforms to practically every item of the above rules. A reinforced concrete stairway, completely enclosed by solid brick walls, runs from basement all the way up; tin-covered fire doors, self-closing, are placed at all openings, except the main outdoor exit. The roof of the stair-well is frame, but has open beams, and no concealed spaces where fire can lurk; the second-story cloak room opening off the largest classroom, has partition and floor of reinforced concrete. Thus the basement may be all ablaze, yet no smoke or flame can reach the other stories until the flooring is entirely burned thru—a matter of at least fifteen minutes. And even supposing another story to be afire, the stairway will be safe and smoke-free until the roof falls. Each floor is entirely cut off from both the others; so the halls cannot get smoke-filled. The average outside fire-escape, you know, is never used, even at drills; but an inside fireproof stair of this character is used daily for every purpose, and so the children turn to it automatically in a moment of danger. The first-story pupils are marched out by the front entrance; at the same time, the second-story classes file out by the rear, without entering the first floor halls at all. The extra cost of enclosed stair-tower and fireproof stairs is little, if any, more than the price of an open fire-escape; and the fire-escape is forbidden by the latest building-laws of most cities!



KENNEDY SCHOOL, PORTLAND, ORE.

So much for "safety first"; we'll take up the other points, now.

The basement (fig. 2) has separate stairways for boys and girls; the toilets are large enough to hold showers and lockers, if needed. Of course, the kindergarten could be turned into a manual training room. The assembly (fig. 4) is more or less of a makeshift; two large classrooms are rigged with a folding partition, so they may be easily thrown together. The storage room in basement might readily be used for laboratories. Open fireplaces serve as ventilators; in muggy weather, a little blaze will start the air to rising.

This Maryland school is set to face east and

(Concluded on Page 58)

JUNIOR HIGH SCHOOL, TRENTON, N. J.
W. A. Poland, Architect, Trenton.

The Junior High School at Trenton, N. J.

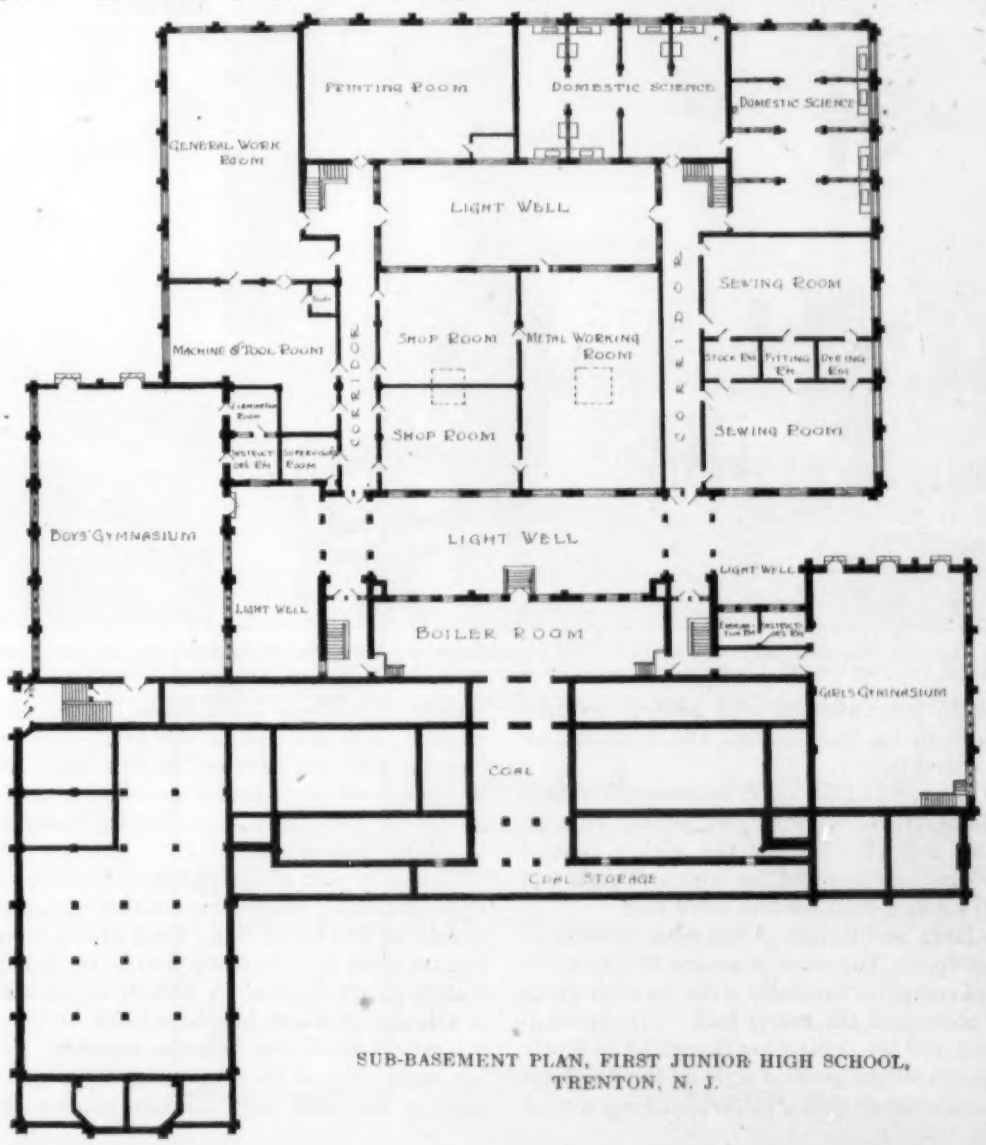
The Junior High School involves problems in planning and construction that are altogether unusual in American school architecture. A junior high school is not an elementary school and it is not fully a high school. Its organization has some features which are found in the upper grades of the elementary school and some features which have been limited in the past to high schools. As organized at present this type of school is not complete unless it covers prevocational courses of a wide variety. This necessitates the planning of a considerable number of shops and workrooms and in fact more shops than have been usual in the high school.

The new Junior High School at Trenton is a building that appeals to us as containing many of the elements of general type and arrangement that must become common to large Junior High School buildings thruout the United States. The plant consists really of two buildings, a school and a shop. The former is a three-story building of the conventional school type, while the latter is a large one-story shop with a small section containing a second floor.

The building was designed by Mr. W. A. Poland, architect and business manager of the Trenton board of education. It is a first-class building in the best sense of the term and the main school building is fireproof thruout.

The main school building has been planned for the broadest possible use as a social center as well as a school. The peculiar shape of the building lot and the desirability of making the auditorium accessible without opening the balance of the school, account for the unusual location of the auditorium and for the disposition of the gymnasium and classrooms. The lot slopes considerably and advantage was taken of this to place the shops on a lower level than the balance of the building.

The sub-basement of the main school building contains only the boys' gymnasium, the girls' gymnasium, the boiler room and space for coal storage. The boys' gymnasium measures 82 feet by 55 feet and is lighted perfectly from three sides. The room is 22 feet high and is fully equipped for gymnasium purposes. Adjoining it there are an examination room for the students and an office for the instructor. The girls' gymnasium is slightly smaller than the boys'. It measures 68 feet by 44 feet and is



SUB-BASEMENT PLAN, FIRST JUNIOR HIGH SCHOOL, TRENTON, N. J.

INTERIOR VIEWS, JUNIOR HIGH SCHOOL, TRENTON, N. J.
Upper Row, left to right, Library and Exterior View of Building; Middle Row, Auditorium and Manual Training Room; Lower Row, Domestic Science Room and Printing Shop.

similar in appointments and general arrangement. It has a large gallery and a wood floor set in concrete.

The basement of the main building has a large boys' locker room, showers and toilets. Similar facilities are afforded for the girls. Special lunchrooms are provided for boys and girls and a small kitchen is utilized to serve both.

The large auditorium is the main feature of the first floor. The room measures 60 feet by 98 feet and compares favorably with the high grade locker room and the music hall. The proscenium arch and the ceiling are decorated modestly with stucco in the general style of the building. The room is fitted with a balcony and has a total seating capacity of 1,200. The floor is pitched slightly from the rear to the front. The stage opening is 29 feet wide and 20 feet deep. Dressing rooms are provided for men and women and provisions have been made for the installation of a large pipe organ.

The main part of the first floor is occupied by eight standard classrooms measuring approximately 23 feet by 27 feet. Each of the rooms is lighted from one side only and is equipped for seating thirty pupils. A feature of each room is a bookcase which has been built in the wall separating the classes from the corridor. Flanking each side of this bookcase there are two built-in cabinets, each accommodating thirty drawers. These are used to store the books, papers and personal belongings of the pupils and make it possible to hold double sessions and to readily make sixty children comfortable in each classroom in alternate sessions.

A rear wing of the first floor is occupied by two laboratories and a locker room. The south wing of the first floor is occupied by a library, an administrative office and retiring room for the teachers. The library measures 42 feet by 22 feet 9 inches and has been beautifully fitted in a modified gothic style. One end of the room is taken up with a large stone fireplace. Built-in bookcases occupy two of the inner walls of the room. The furniture is of the best type of

library equipment and the room is restful for study or quiet reading.

On the second floor of the building there are ten classrooms of standard size and a laboratory suite. The latter consists of two laboratories, an apparatus room which is of a size sufficient to be used as a teachers' workroom, a large dark room, a locker room and a small apparatus room. The gallery of the auditorium may be entered from the main corridor of the second floor.

Communication in the building is afforded by means of a central corridor to which access is had to five entrances. The stairways are well distributed so that one serves the auditorium and the laboratory wing and is practically independent of the remainder of the structure. The three stairways are enclosed in fireproof towers that will serve as fire-escapes in case of panic or conflagration. The arrangement of the building in this respect is unique and especially praiseworthy.

The shop building is quite different in character and construction from the main school. The roofs are wood, covered with heavy fireproof material and the construction is of the factory type. The building is a large square, with a light well in the center and is splendidly lighted from all four sides.

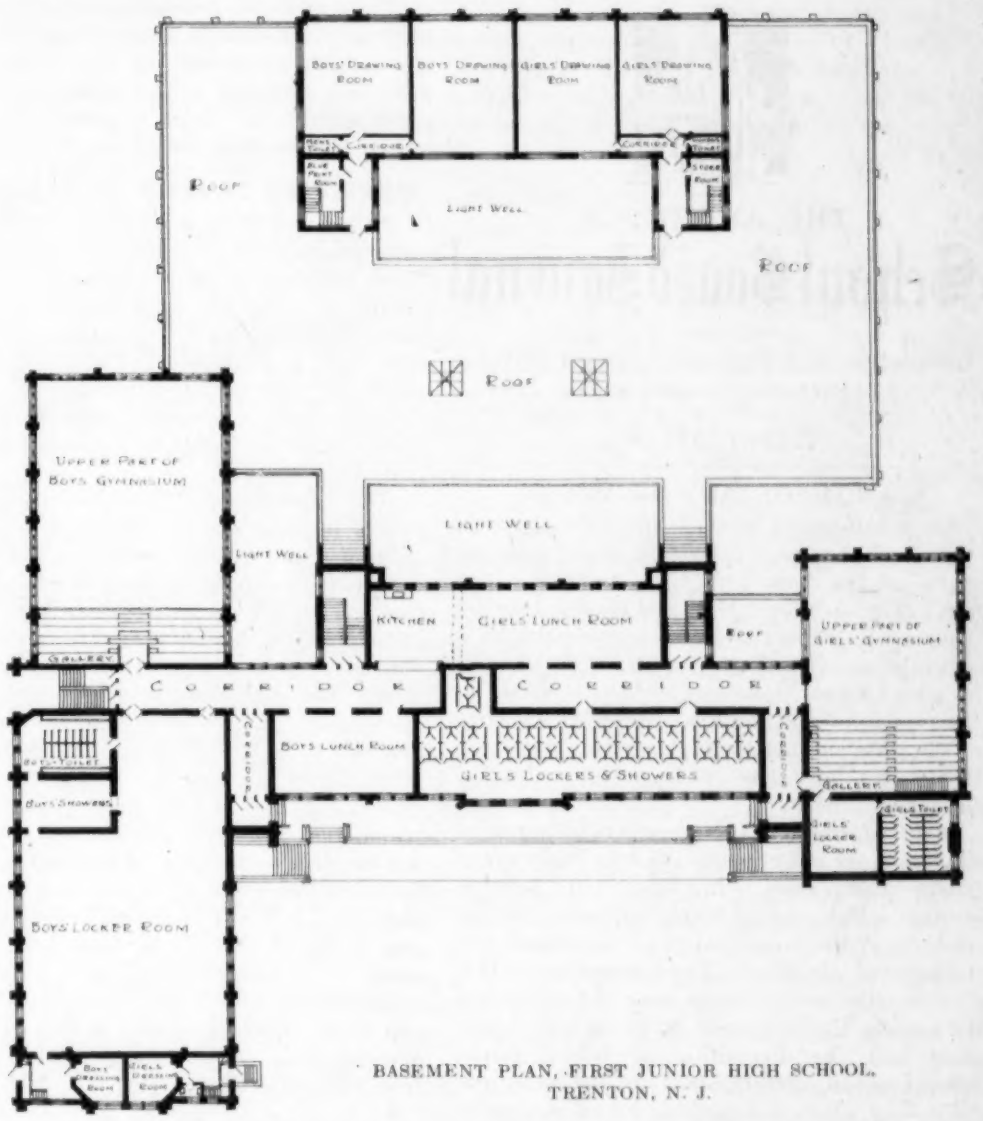
The shopwork of the school divides itself into seven general types, of which two are offered to girls and five are offered to boys. In the boys' department there is a general workroom in which woodworking is taught with a strong tendency toward carpentry and cabinet making. This room measures 40 feet by 72 feet and is lighted from two sides. A second shop is devoted to machine woodwork and measures 28 feet by 50 feet. Printing is offered in a large, well lighted room 40 feet by 60 feet in size. Sheetmetal work is offered in a small shop, forging is similarly taught in a special room and a large shop is set aside for other machine shop practice.

The domestic science department is housed in two large rooms measuring about 40 feet by 60 feet. The rooms are divided into bays, each of which is fitted up like a complete home kitchen. Each bay has a small gas range, a sink, kitchen cabinet and a general storage cabinet. A small portion of the shop building is carried up to the second floor and affords space for four large, fully equipped drawing rooms.

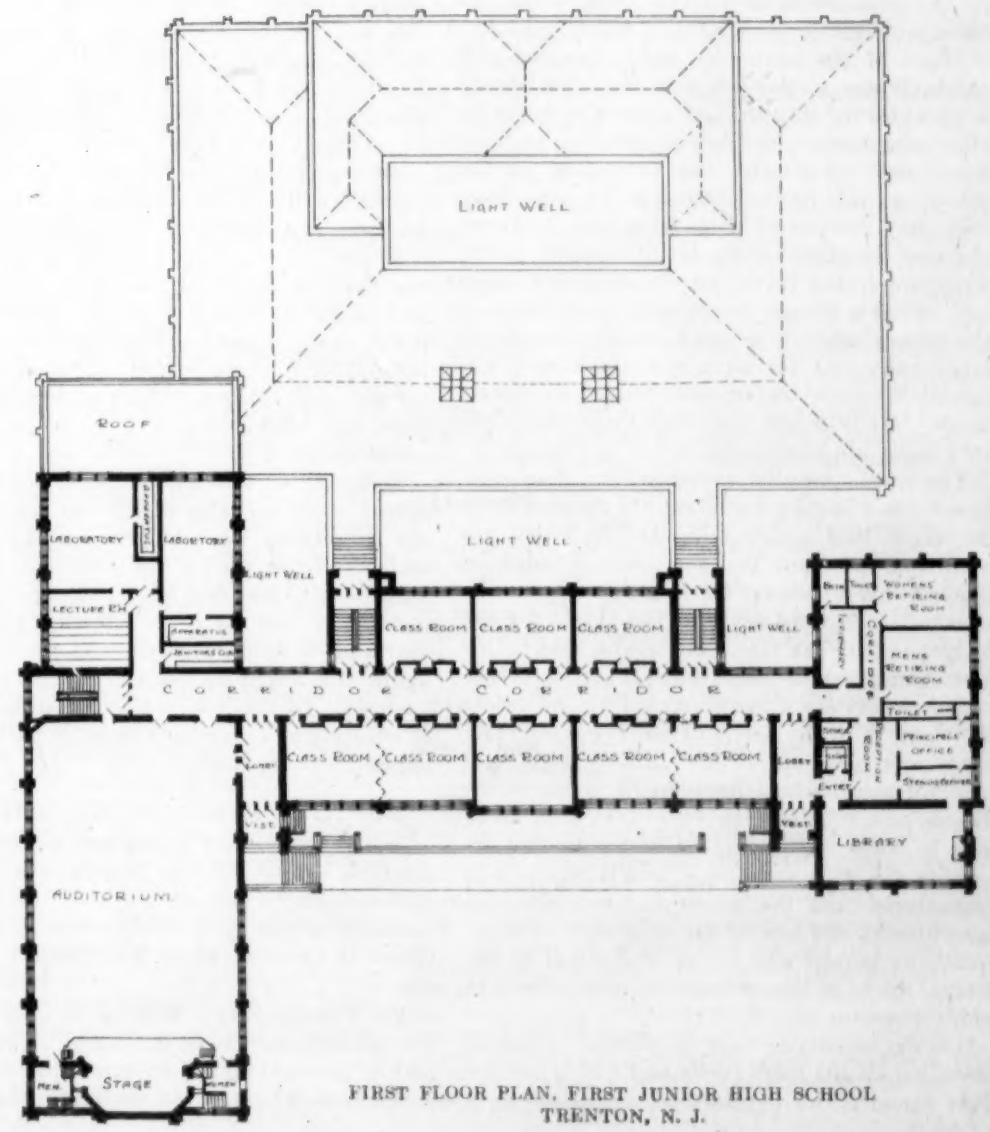
The buildings are substantial in construction and finish. The main structure is fireproof and has concrete floor construction thruout. The exterior walls are faced with dark red brick and trimmed with cut stone. The corridors have concrete surface floors and the top floors in the classrooms are hard wood. The building is heated with steam and ventilation is provided by means of a direct unit system. In each classroom one radiator is enclosed and is fitted with a motor driven fan, which draws the air from outdoors and propels it thru the radiator immediately into the classroom. Auxiliary heat is provided by means of direct radiation in the classrooms and in other parts of the building.

The building has a total capacity of 36 divisions of thirty pupils each. The faculty includes thirty academic teachers, a librarian, a special teacher in charge of the assembly hall and a teacher of writing. In the shops, five drawing teachers, two teachers of sewing, two teachers of household arts and four teachers of manual training are employed. The faculty also includes two gymnasium instructors. The school day consists of six one-hour periods, of which four are devoted to academic work and two to shopwork.

The building was planned by Mr. A. B. Poland and cost slightly in excess of $300,000.



BASEMENT PLAN, FIRST JUNIOR HIGH SCHOOL, TRENTON, N. J.



FIRST FLOOR PLAN, FIRST JUNIOR HIGH SCHOOL TRENTON, N. J.

THE AMERICAN
School Board Journal
DEVOTED TO
Legislative and Executive School Officials
WILLIAM C. BRUCE, Editor

EDITORIAL

AN IMPORTANT DECISION.

On a subsequent page of this issue appears a summary of a most important decision on the status of the New York City board of education. The decision which was rendered by Dr. Thomas E. Finegan, deputy commissioner of education for New York City, is worthy of study by school boards because it affirms unmistakably the principles that the school board is an agent of the state and not a city department, and that it has and must have independent control of the school funds.

Many citizens and even members of boards of education are not clear on the true character of boards of education. City officials for political or other selfish reasons, refuse to understand the relations of the municipality to the schools and the board of education. The consequence is that there is continual friction over the control of the schools, the levying of taxes for school purposes and the disposition of school funds. Schools are an instrumentality of the state, provided very wisely for the safety and perpetuity of an intelligent democracy. The school board is the administrative agency thru which the state provides for the control of the schools.

Much of the confusion which has and still exists, is due to the fact that the school board is provided for thru the city charter so far as its size, organization, method of selection, etc., are concerned. Similarly, the limitation of the school tax rate has been fixed in the same basic city law. Neither of these facts have, however, changed the status of the board or of its funds. They are rather in the nature of conveniences and afford a greater measure of adaptation of the school control to local conditions and to home rule. So far as school funds are concerned they are from every standpoint state funds. Mr. Finegan makes all these conditions very clear and conclusive.

The most plausible argument for municipal interference in school matters has resulted from the claim that school taxes locally levied are municipal taxes and that the power of check on them should be placed in the hands of the officials who are responsible to the voters for the budget and the tax rate. Those who hold to this view forget apparently that in cities where school boards are directly elected by the people the check is in the hands of the voters who can settle any question of high school taxes and wasteful use of school funds by the powerful influence of the ballot. In New York City there may be some reason for the argument, but its validity becomes very questionable when it is remembered that the mayor has the power of appointment and can refuse to appoint or reappoint any person who is not committed to the general views of the community and of the city administration.

It is our conviction that members of boards of education should more freely and widely inform their communities on the real nature of their office and on the true character of school funds. Such information is always valuable and serves to closer understanding and better relations between city and school authorities. Once a community has fully grasped the principles there will be clear sailing for the schools.

CERTIFIED CHECKS ON SCHOOL BIDS.

School boards as a class are careful purchasers and surround their business with precautions that have grown up as a result of experience. Many of them are more careful in preparing their requirements for bids than are municipal and state governments and some are even more exacting than is the federal government. At least one type of precaution which school boards take in bidding should be suspended for the period of the war.

The majority of boards of education and rural school trustees require bidders on building construction, on furniture, school supplies and other purchases to deposit certified checks, on an average, of ten per cent with their bids. This requirement has the sanction of law in some states but is only a local regulation in many communities. The sums thus held by boards very frequently amount to, or exceed, the total of the contract to be let. During 1915-16 an excess of $100,000,000 was spent for permanent school improvements and it may be conservatively estimated that fully this amount was tied up during the year in the form of certified checks. The individual checks were held in some cases a few days, but it is not overstating the facts to say that some of the checks were held from two weeks to six weeks and even three months.

Any business man will appreciate the handicap under which he suffers if any considerable amount of his cash, working capital, is tied up from two weeks to a month.

Since the beginning of the war the federal government has discontinued its practice of requiring certified checks with bids for war materials and for other goods and services required by the government departments. This action has been taken in order to relieve the credit situation in so far as it is affected by the use of certified checks with bids. It is a part of the general policy of the government to promote the mobile credit of the country and to keep all business at its highest point of efficiency.

It appears to us that school boards might follow the example of the federal government and at least for the period of the war discontinue the use of certified checks. This should be done, we believe, solely in the interest of easier credit and for patriotic reasons. Other safeguards, we believe, can be provided to take the place of the certified check.

Many firms who are engaged in supplying school needs are also doing war work. These are in extreme need of every penny of credit and may be excused if they are slow to bid on school work where certified checks are demanded.

After all, the use of the certified check is an overhead expense which the manufacturer must figure and which he must charge to his school business. In this connection school boards will be effecting an economy if they discontinue their requirement for checks.

BOSTON'S NEW SUPERINTENDENT.

The Boston school committee has broken the deadlock caused thru its determination to elect a Bostonian to succeed Supt. F. B. Dyer. A compromise has been finally effected which resulted in the election of Mr. Frank V. Thompson.

Mr. Thompson is well fitted to head the Boston school system. By training, by experience and by personal ability he stands out among his colleagues. If there has been any objection to him on the part of the members of the board this has been due to his aggressiveness, efficiency and disregard for precedent. We may expect to see a very active administration of the Boston schools during Mr. Thompson's term.

UNWISE CRITICISM.

Mr. William H. Allen prints in his "Public Service" a letter from a city superintendent in which the conditions surrounding teaching as a life's calling are bitterly attacked. One paragraph will serve to illustrate the writer's extreme point of view. He writes:

"We have absolutely no tenure of office. We are wandering intellectual hoboes, dismissed at the ill-will or insinuation of any blacksmith, carpenter, or shoemaker."

While it is true that teachers deserve a longer tenure of office and greater security in their calling, the above statement must be challenged for its truth and for several implications which it contains. We are living in a time of serious disturbance when the condition of the public mind and of personal mental states permit of radical propaganda, unproven statements and illogical arguments and when any disturber or malcontent is listened to as a prophet, provided his plaint strikes a popular chord with a class or group of persons. The present statement belongs to this type of public utterance. It is unreasonable and unjust and could be made only by a man who has suffered a heavy disappointment, or who has been a failure in meeting those personal and human difficulties as well as professional and occupational duties which every schoolman, particularly a superintendent of schools, must meet. It is an unhealthy state of mind that will cause a man to class his associates, among whom he must include himself, as intellectual hoboes. Probably there are, as Mr. W. E. Chancellor claims, some super-morons in the teaching profession.

We are not defending here the unwarranted dismissal of teachers and school officers. Such actions on the part of school boards are to be condemned, whether they result from political or personal motives and whether they are performed by lawyers and doctors or blacksmiths and shoemakers.

The fact is that school boards in the vast majority of cases are fair and just, and that they rarely dismiss teachers and superintendents without cause. Teachers as a class are far more secure than other public servants and are at least equally as secure as men and women in private pursuits. Practically none of the latter are secured by yearly contracts as are teachers or by three-year contracts as are superintendents.

It is our experience that the great majority of schoolmen who are dismissed have given ample cause, directly or thru a long series of minor shortcomings, for their own failure.

CITY PLANNING AND SCHOOLS.

Specific planning, based upon well defined principles, is becoming more and more common in the development of new cities and towns and in the improvement of old communities. Town planning is approaching the dignity of a science which calls for the services of well defined types of experts and which draws from the fields of architecture, sociology, industry, public hygiene, etc.

In the large cities the movements for zoning streets and neighborhoods to stabilize and direct the use of real estate for well defined purposes, are growing steadily and are becoming a fixed feature of city government. The purpose is to advance the common good as well as to protect individual owners, and city beautification, improved transportation and communication are among the results sought for.

City planning has been given an enormous impetus thru the war. In every section of the country where war industries have been established the problem of housing has become acute and it has been necessary to provide for the workers and their families. Here not only the government but private concerns have exhibited a most commendable attitude in seeking to provide healthful, comfortable homes and to make these so attractive from the architectural standpoint as to leave nothing desired. Attention has been directed to the laying out of entire village and city sections on a comprehensive plan which includes definite data for building plots, streets, parkways, business districts, communication, the size and character of homes, etc.

An examination of a dozen recent community projects leads to the conclusion that school provisions have been largely neglected by city planners. Only one project which we have seen gives evidence that an attempt has been made to place the schoolhouses in or near the centers of population. The architects seem to have had a hazy idea of the function of the school and of its essential relation to each family in the community.

It is our conviction that town planning must include more than it does at present, if its exponents are to provide plans that will work out in practice as beautifully as they do on paper. Certainly, they should consult the school authorities before they set a high school on a main thorofare where there will be noise as well as dangerous vehicular travel which the children must pass. Similarly, they had better learn whether a schoolhouse in an extreme corner of a subdivision will not require too long travel distances for the smaller children.

It is a duty of school authorities to interest themselves directly in all city planning activities and to give advice and help where possible. Both in city zoning plans and in new projects they should assert themselves so that school facilities will be an essential part of the plan. In the English model towns both of the war period and of the pre-war period, the schoolhouse is an essential of the scheme. The same is true of Germany and in a lesser degree of the remaining European countries.

MR. METCALFE APPOINTED.

A most gratifying appointment made during the present summer, is that of Mr. Tristam W. Metcalfe, to the position of director of research in the New York City schools.

Mr. Metcalfe has won the universal regard of schoolmen by his intelligent discussions of school affairs and his helpful reporting of school news in the New York Evening Globe. During a period of more than ten years, no man among American journalists has understood school conditions so well or has presented them so fearlessly and so accurately.

By disposition and training, Mr. Metcalfe is well fitted for the position of research in the New York schools. In the past he has approached every school problem in an open minded and fearless manner. He is not committed by personal practice or experience to any given educational theory or classroom practice, and is therefore, able to approach his new work with a free hand.

STANDARDIZATION NEEDED.

The schoolhouse is becoming each year a more specialized type of building. As the organization of schools and systems of administering them are becoming more complicated, and as courses of study are increasing in number and are being enriched in content, so the school building is becoming each year a more complicated instrument whose parts are necessarily more finely adjusted. Included in this complication of schoolhouse design and construction are the increased demands made by hygienic science, by the requirements for better protection against fire and panic, by the demand for better and more permanent construction and by the common use of the building for extension education, social centers, etc.

It would require a thoro study of each of these causes of refinement in school architecture to locate the exact causes for unsatisfactory new school buildings. The principal causes of inadequate and unsuccessful schools may be sifted to five or six immediate causes. First, the selection of an incompetent or inexperienced architect. Second, insufficient knowledge of the needs of a new building on the part of a principal, a superintendent, a school board or its building committee. Third, the lack of a complete program before the site is purchased and the plans are prepared. Fourth, the lack of unanimity in deciding the educational and administrative problems which affect the plan and the construction. Fifth, the judging of competitive plans without a proper professional advisor and without complete data for comparison. Sixth, the failure to understand the genius of a building plan and to properly adapt administrative methods to the plan, or to utilize the opportunity of the plan for economical and efficient school management.

Back of and more important than any of these causes of failure of new schools is the lack of specific standards, by which plans submitted to school boards can be measured and judged. Altho architects have had general figures for the size of classrooms, the width of corridors, the width of stairways and altho the opinion has been generally prevalent that school architecture is a more or less well developed and fixed science, we have as a fact had no particular standards based on well established precedents. As a consequence plans have been judged largely on a haphazard basis, and personal opinion, rather than well founded data, has been the criterion. School boards have adopted plans for a variety of reasons in which they have sought to combine the elements of efficiency and economy without actually having these elements fully and authoritatively stated.

A study has been made in the direction of schoolhouse standardization thru a committee of the National Education Association headed by Mr. Frank Irving Cooper, of Boston. The committee has been at work two years and has thoroly analyzed several hundred buildings. One of the simplest and most elementary results of this study has been the establishment of the fact that a schoolhouse plan is not truly efficient if at least fifty per cent of the floor space is not devoted to instruction purposes. It has been remarkable that buildings which have been considered models of design and planning have fallen below this standard. At the same time considerable surprise has been expressed by numbers of schoolmen who thought that a much larger proportion of space could be devoted to instruction. The committee hopes during the coming year to extend its field so as to develop ultimately a rather complete system of standards—a measuring stick—by which schoolhouse plans can be measured. The committee realizes that its labors will not be effective unless the members keep in mind not only the elements of economy but also educational efficiency. Their problem is not to minimize needed and desirable elements in schoolhouses but to eliminate every phase of planning and construction which is uneconomical either thru too generous allotments of space or thru lack of space.

The school boards of the nation will welcome a general statement of schoolhouse standards which they can apply in the solution of their local building problems. It is to be hoped that the committee will press its work vigorously so that its labors will be at the disposal of school authorities within a very short time.

MR. HARTWELL TO BUFFALO.

Buffalo is fortunate in its choice of superintendents. Dr. Henry P. Emerson, who held the office for more than a quarter century was until his retirement a few weeks ago, one of the strongest and most progressive of the older city school executives. He kept the Buffalo schools well in advance among the larger cities and this in spite of many obstacles and without the backing of a lay board of education.

Dr. Emerson is now succeeded by Mr. Ernest C. Hartwell of St. Paul, and the choice of the board of education is a most happy one.

Mr. Hartwell's rise to the Buffalo superintendency has been little short of phenomenal. Strong educational leadership, a fearless and straightforward policy in dealing with school board members and teachers, and hard common sense have been the chief factors in his successive promotions. Added to these qualifications Mr. Hartwell has displayed a love for hard work and a genuine desire to improve the schools without thought of personal reward or recognition. At the age of 36 he is a leader who deserves his new office and the recognition which his professional colleagues have given him in the presidency of the Department of Superintendence. With the co-operation of the teaching corps and the new board of education, Mr. Hartwell should make a good record in progressive administration of the Buffalo schools.

Accurate inventories are as much a part of a successful school system as they are of a manufacturing plant or a mercantile establishment. The manufacturer who finds his business unprofitable because too much capital is tied up in non-productive material, in wornout patterns and models, in saleable waste is no worse than the school board that has useless buildings, stocks of useless teaching materials, etc.

Envy is a by-product of success in education.

Don't stand on your dignity. There isn't anything much more slippery.

Some principals take the word supervise too literally: they overlook.

He knows the Truest Way to Teach
Who puts the Great Thoughts in Simple Speech.

More than a million dollars have been raised by the schools of Minneapolis in various forms of patriotic work, according to Supt. B. B. Jackson.

Of the total contributions since organization, $14,038 were contributed thru mite boxes in the schoolrooms and the remaining $3,828 were earned thru the proceeds of a Red Cross bazaar. Contributions to the Red Cross since January total $17,866.

A war ambulance has been purchased thru funds raised by the pupils of the Field School at Rogers Park, Ill., and will be sent on to some hospital unit in France.

That war deficits open up a new field of college rivalry is the opinion of Frank D. Fackenthal, secretary of Columbia University. Old forms of rivalry have given way to the latest distinction of the largest war deficit.

Mr. Fackenthal points out that some of the larger eastern institutions have shortages running as high as $300,000. The rise in the cost of physical upkeep and the shrinkage in registration figures have all tended to play havoc with university budgets.

One of the interesting things about college and university deficits is that they are not like most deficits, complete losses during war-time but are being made to pay large dividends in the form of national service. Colleges which find themselves obligated for fixed expenditures which the number of students does not justify, have turned over their unused facilities to the government for research and instruction purposes.

A Code of Professional Ethics

School boards sometimes cause themselves and the teachers whom they employ considerable trouble and annoyance, because of a lack of information on the accepted practices of the teaching profession. While the duties and relations of superintendents, principals and teachers are fairly well defined in the statutes and in the regulations of school boards, there are many activities and acts which are determined by the unwritten laws of experience and general principles of right action. An observance of these experiences and principles is essential if friction and trouble are to be avoided.

As a guide for both school-board members and teachers, the New Hampshire Teachers' Association has recently prepared a statement of professional ethics which covers the chief accepted principles of action between teachers and school officials. This guide is, in part, as follows:

Responsibility.

1. The proper conception of education being to develop all the powers and faculties of body, mind and spirit, with which a child has been endowed by the Creator, the first duty of teachers is to safeguard and bring to the highest state of perfection the physical, intellectual, aesthetic, moral, social, and so far as possible, the spiritual endowment of their pupils.

2. As the teacher must necessarily stand *in loco parentis*, in rather large measure, the duty of teachers to parents is to seek their acquaintance, to co-operate with them in the education of their children, to become informed of the home life and conditions by friendly visits, and in all other respects to manifest an interest in the individual child. Above all, a teacher should be frank, as well as sympathetic, in dealing with parents. Criticism by parents should be received with courtesy and patience.

3. The duty of teachers to the community is to be loyal to those in authority over them. In case of a conflict of educational ideals, between teachers and trustees or school boards, while they should recognize the fact that the school authorities must direct the general policy of the school, it is the duty of teachers to be loyal to their professional ideals, to protest against any violation of professional ethics, and in extreme cases to resign, stating their reasons to the community.

While never exploiting their position, teachers should always maintain a progressive conservatism of thought and action, dignity of character, honesty of purpose, and should take an unqualified stand for the best in education and in social life.

The Duties of Teachers to Fellow Teachers and to the Profession at Large.

1. It is the duty of every teacher to regard every other teacher as a fellow craftsman and as entitled to all the rights, courtesies, and emoluments that usually obtain in other professions, with recognized standards.

2. It is unprofessional for teachers to criticise co-laborers and predecessors, as such procedure tends to weaken the confidence in which the work of our profession is held by the community.

3. All teachers should actively affiliate themselves with professional organizations and should acquaint themselves with the proceedings of the state association and should interest themselves in its activities.

4. It is an essential part of the ethics of the profession that teachers should constantly familiarize themselves with its recognized and authoritative literature.

5. Since they are rightly regarded as examples to pupils, teachers should always so conduct themselves that no just reproach may be brought against them. Where liberty of conscience is not concerned, they should stand ready to make personal sacrifice, because of the prejudices of the community in which they live.

6. It is unprofessional for teachers to tutor pupils of their own classes for remuneration.

7. It is unprofessional for teachers to promote the interests of canvassers and other salesmen, either directly or indirectly, by writing testimonials of their wares.

8. It is unprofessional for any teacher to lend himself to any scheme of self advertising.

9. It is unprofessional to call in or to allow the use of substitutes, except for serious illness or for other grave reasons.

10. A clear understanding of the law of contracts is incumbent upon all teachers. Since teachers should scrupulously keep whatever agreement they make, they should refuse to sign a contract unjust and humiliating in form.

11. It is unprofessional for teachers to resign during the period for which they have been engaged. They may rightly ask to be released, by giving notice of not less than four weeks, but must in case of refusal abide by their contract.

12. It is unprofessional for a teacher to underbid a rival in order to secure a position.

13. It is unprofessional for a superintendent or other school officer to offer a position to a teacher without first conferring with the superintendent under whom that teacher is employed.

14. It is highly unprofessional for a superintendent or other school officer to visit, with a view to employment, a candidate at work, without the permission of his or her superintendent. When visiting schools, the visitor should never disarrange the work of the day.

15. It is unprofessional for superintendents and teachers, in their relations with publishing or supply houses, their agents or salesmen, to give just grounds for the suspicion of obligations tending to influence the purchase or adoption of books or supplies in favor of any particular agent or firm.

16. The indiscriminate writing of general recommendations for pupils or teachers is unprofessional.

17. Teachers should at all times be ready to assist one another by giving information, counsel and advice, and by such services and acts as teachers can perform without detriment to themselves or their work. Such reasonable service should be regarded as a professional duty for which remuneration beyond actual expenses should not be accepted.

New York Schools Independent of City

The board of education of New York City has been emancipated from the influence of the city authorities thru a recent opinion given by Assistant Commissioner Thomas E. Finegan to Auditor Henry R. M. Cook on the application of the 1917 law to the board. The high lights in the opinion are as follows:

"The responsibility for the operation and management of the public school system of the City of New York is specifically and definitely placed upon the Board of Education."

"Regulations prescribed by such (municipal) officers have no legal or binding effect upon the Board of Education."

"The law did not confer on municipal officers any powers whatever in relation to the administration of the schools."

"There is not a syllable in the law which confers upon the Board of Estimate and Apportionment or any city officer authority over the expenditure or administration of the school funds."

"The payment of such funds shall be on the audit of the Board of Education."

"To perform its work as contemplated under the law and in pursuance with the recognized principles of sound school administration, the board must have absolute control of the expenditure of such funds."

"The Board of Education . . . . is a corporate body with independent powers. It is not a city body."

"It is the duty of the board to resist to the utmost any encroachments upon its powers by city bodies or city officials."

The opinion has been delivered to the Board of Education and is to be considered in committee of the whole after all of the members receive a copy. It is said by school officials to be the most important document relating to the management and administration of the school system since the Gunnison decision years ago by the Court of Appeals. In his opinion, Dr. Finegan says, in considering the question relating to the control of the funds appropriated for school purposes:

Law Gives City Officials No Power Over Schools.

"Very much of the trouble and friction in the administration of the school affairs in New York City during recent years has been due to the action of municipal officers attempting to control the school system, and to determine educational policies by the authority which such officers improperly and illegally exercised in the appropriation of funds for school purposes.

"The Board of Education was charged with the administration of the schools of the city. The law made such board responsible for educational results. The law did not confer on municipal officers any powers whatever in relation to the administration of the schools. . . . The law conferred upon certain municipal officers the authority to appropriate funds for various purposes, and among those objects were the maintenance of public schools.

"The Legislature in the enactment of the city school law in 1917, sought to correct the situation caused by municipal officers usurping the powers of the New York Board of Education, by providing for a direct appropriation of funds sufficient to meet the expenses of maintaining the school system and by giving full control of these funds and responsibility for the expenditure of the same to the Board of Education . . . The law in this respect is mandatory and neither the Board of Estimate and Apportionment nor any other city official is given any discretion in the matter whatever.

Board of Education Controls School Funds.

"The Board of Estimate and Apportionment had no legal power or authority to impose any conditions upon the expenditure or administration of such funds in making the appropriation. If such conditions were imposed they are of no binding effect. The Board of Education is not required to respect such conditions.

"There is not a syllable in the law which confers upon the Board of Estimate and Apportionment or any city officer authority over the expenditure or administration of the school funds. On the contrary, the language of the entire act is so clear and the intent of the Legislature so manifest, that there can be no question of the absolute power and authority of the Board of Education in this matter."

Dr. Finegan points out that funds raised by the city for school purposes shall be deposited in the treasury of the city and credited to the Board of Education, and "the payment of such funds shall be on the audit of the Board of Education." "Since the power of audit is expressly conferred upon the Board of Education, it may not be conferred upon the Finance Department," says the opinion. Only in case the Board of Education should audit a claim, either for salary or otherwise, and it should appear to the Finance Department that such claim was fraudulent, might that department refuse to honor the claim thus audited.

Dr. Finegan also says that this question goes to the very heart of a vital point of school administration:

"Has the Board of Education the sole authority to determine who the employees of that Board and of the school system may be, or may the action of the Board of Education in such matters be limited or circumscribed by regulations of the municipal officers—either the City Controller or the Board of Estimate and Apportionment?

"The responsibility for the operation and management of the public school system of the City of New York is specifically and definitely placed upon the Board of Education. To discharge that obligation to the people of the city and to the State, the Board of Education must possess absolute power to select such persons to administer the school affairs as that Board may determine.

Entire Responsibility Put On Board of Education.

"The Board of Education is charged under the law with the duty of creating such organization and machinery as may be necessary to determine

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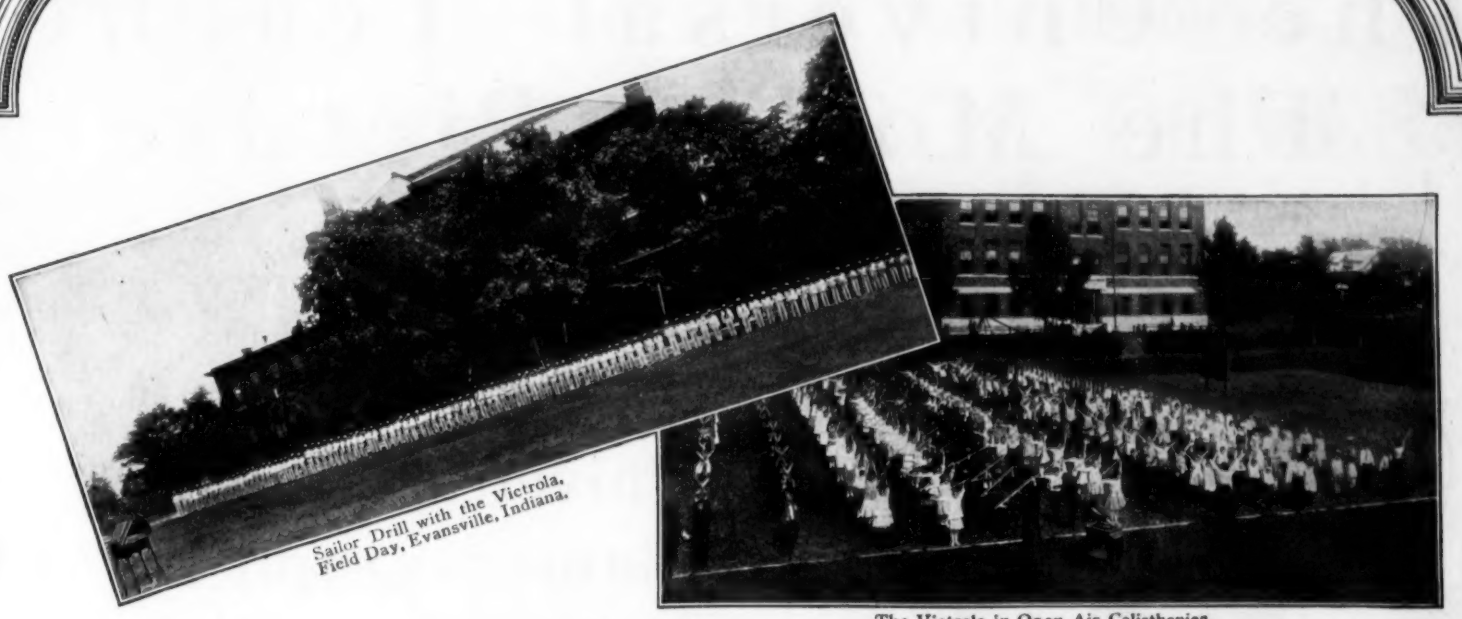

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	Sellenger's Round (From "Country Dance Tunes," Set III) (Cecil J. Sharp)	
18356 10 in. 85c	**Lady of the Lake**—American Country Dance (Burchenal)	
	Old Zip Coon—American Country Dance (Burchenal)	
17777 10 in. 85c	**Seven Jumps**—Folk Dance ("Dances of the People") (Burchenal)	
	Östgötapolska—Folk Dance ("Folk Dance Music") (Burchenal and Crampton)	
17084 10 in. 85c	**Shoemaker's Dance**—Danish Folk Dance (Elizabeth Burchenal)	
	Klappdans—Swedish Folk Dance (Burchenal and Crampton)	

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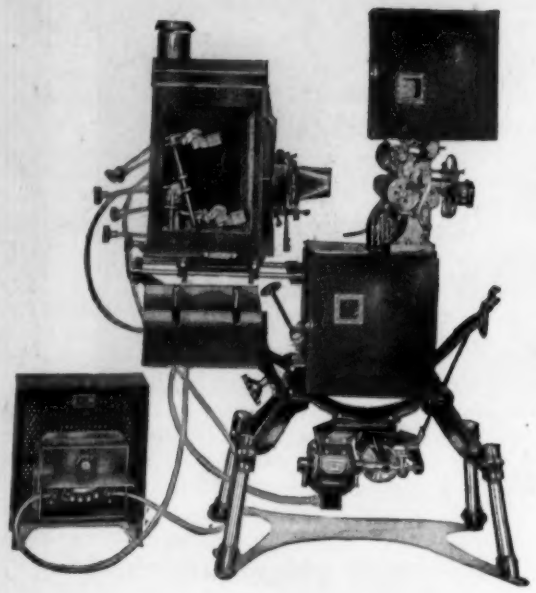

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(Concluded from Page 46)

the qualifications of all of these employees and also to make their appointments. To divide this responsibility in any way whatever with the officials of the city government would bring utter confusion and chaos into the school affairs."

"They may perform all of these official acts without regard to regulations adopted by municipal officers or bodies of the City of New York. Regulations prescribed by such officers or bodies have no legal or binding effect upon the Board of Education. Any attempt on the part of such officers or bodies to impose regulations upon the Board of Education restricting or interfering with the freedom and independence of the action of such boards should be resented and resisted by the Board of Education."

PERSONAL NEWS of SUPERINTENDENTS

Mr. George J. Loewy, New York City, has been named by the board of education to fill the position of Director of Vocational Activities. Mr. Loewy attended the public schools, was graduated from the City College and completed courses at Columbia and New York Universities. He has been principal of the Murray Hill Trade School and of the Brooklyn Vocational School for Boys.

Arthur W. Hale has been appointed superintendent of schools at Franklin, Mass.

Miss Emily M. Pevear, a teacher in the Hugh O'Brien District of Boston, retired at the close of the school term after an active service of 51½ years in the public schools of Roxbury. Miss Pevear enjoys the unique distinction of not having lost a single day thru her long teaching career.

Mr. F. W. Nichols has been appointed superintendent of schools of Districts 75 and 76, at Evanston, Ill., for the next year.

Supt. Charles M. Gill has been re-elected head of the schools at Quincy, Ill.

Dr. Aven Nelson has been elected permanent president of the University of Wyoming to succeed Dr. Clark A. Duniway.

Mr. C. W. Mason, principal of the John Marshall School, Norfolk, Va., has been appointed supervisor of instruction for the coming year. Mr. Mason has entered upon a special course at Columbia University.

Supt. Bruce W. Tallman of Hampton, Ia., has resigned to engage in army Y. M. C. A. work.

Mrs. Eva W. White, for several years director of Boston's social centers, has resigned in order that she may give her entire time to the women's and girls' work at the cantonments. Mrs. White plans to unify and co-ordinate the social activities in which soldiers and their girl friends participate.

Supt. H. C. Hess of New Ulm, Minn., has resigned as county director for the Public Safety Commission to give his time to the work of vocational training in the army.

W. H. Eisenmann of Elmhurst, Ill., has been appointed superintendent of schools at Alton, to succeed Robert A. Haight.

David A. Ward, superintendent of schools at Mannington, W. Va., for the past seven years, has resigned.

Supt. Wilson Hawkins, of Canton, O., has been elected president of Mt. Union College Alumni.

Supt. Herbert F. Taylor of Manchester, N. H., has been re-elected for a two-year term.

Chester D. Stiles has been elected superintendent of schools at Westfield, Mass., to succeed C. E. Fisher.

T. F. Fitzgibbon of Columbus, Ind., has resigned to accept the superintendency at Muncie.

Supt. Charles S. Jackson has been re-elected at Lynn, Mass.

Supt. Clarence N. Flood, of Saugus, Mass., has resigned.

Frank V. Thompson, assistant superintendent of schools of Boston, has been elected superintendent to succeed Frank B. Dyer. The appointment is for six years and carries with it a salary of $10,000.

Mr. R. G. Jones, assistant superintendent of schools of Cleveland, O., has been appointed acting head of the schools during the absence of Mr. F. E. Spaulding, who has gone to France to undertake educational work for American soldiers.

Supt. John P. Garber of Philadelphia has been appointed a member of the Americanization Advisory Committee of the Federal Bureau of Education, for teaching the principles of citizenship to foreign-speaking adults. The committee is composed of seven leading educators who will have charge of the campaign and the working out of methods under which it will be conducted.

Lawrence E. Moore has resigned as secretary of the board at Saugus, Mass.

James Storer, secretary of the board at Buffalo, N. Y., has been placed in class one of the draft and is liable to call for service.

Donald DuShane of Clinton, Ind., has been appointed superintendent of schools at Columbus. He succeeds T. F. Fitzgibbon.

Dayton, O. William Prinz has been elected supervisor of grade schools for the next year. Mr. Prinz will continue as principal of one of the grade schools, while discharging his new duties.

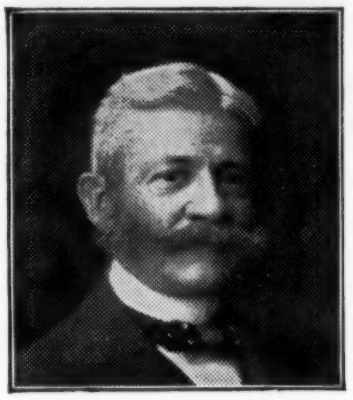
Supt. Charles E. Chadsey of Detroit, Mich., has been given an increase in salary of $3,000, making his annual salary $12,000.

Supt. Frank E. Spaulding of Cleveland, O., has been appointed a member of a commission of three American educators who will leave shortly for France to organize a school and university curriculum for American soldiers. The work is to be conducted under the direction of the army Y. M. C. A. and the American University Union and is intended to extend the education of those who left school to enter the service of the government.

Mr. Lucian G. Hickman, principal of the high school at Frankford, Ind., has been appointed superintendent of schools to succeed O. M. Pittenger.

H. B. Wilson, for the past five years head of the schools at Topeka, Kans., has been elected superintendent of schools at Berkeley, Cal. Mr. Wilson entered upon his duties August first.

Mr. Wilson received his education in the public schools of Clinton County, Indiana, where he was born. He is a graduate of the Indiana Normal



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School and has degrees from the Indiana University and from Columbia University.

The professional record of Mr. Wilson covers a principalship in the schools of Salem, Indiana, and as superintendent of schools at Franklin, Ind., and Decatur, Ill. He had been superintendent of schools at Topeka since 1913.

Supt. J. W. McClinton, of Pueblo, Colo., was recently elected a director of the Chamber of Commerce of Pueblo for the coming year. The election of Mr. McClinton to a directorship in the Chamber is a fair recognition of a schoolman by a businessman, considering the fact that the city has a population of 60,000 and the further fact that Mr. McClinton has been a resident only ten months.

W. P. Harris has been elected superintendent of schools of Joplin, Mo.

Charles William Spofford, formerly a member of the school board of Evanston, Ill., is acting as business manager for the Y. M. C. A. at Camp Terry, Cal.

Mr. C. C. Lively, of Latrobe, Pa., has been appointed principal of the high school at Charlerot.

Supt. E. A. Smith of Salt Lake City, Utah, has been re-elected for a two-year term. Supt. Smith during his incumbency reorganized the school system and co-ordinated the work of the Junior and Senior High Schools.

To further increase the efficiency of the schools the board has created several supervisory positions. Mr. L. M. Gillerman has been elected supervisor of mathematics; Miss Ella M. Dukes supervisor of English and Miss Mathilda Domenge of French and Spanish.

Supt. Wm. D. Fuller, of the Old Town-Orono, Me., School Union, resigned July first, to become professor of education in the University of Maine. Mr. W. O. Chase, of Presque Isle, succeeds him.

R. S. Penfield, recently re-elected superintendent of schools of Rankin, Pa., has resigned to enter the publishing field. He is succeeded by Mr. Charles L. Wilson.

Mr. S. R. Grim, of Charleroi, Pa., has been elected superintendent of schools at Rochester, at a salary of $2,200. He succeeds Wm. S. Taft, who has become State High School Inspector.

Dr. John Alleman of Greensburg, Pa., has been elected superintendent of schools at Uniontown.

Supt. O. J. Gibson of Williamstown, W. Va., has resigned.

Supt. A. A. Kincannon of Memphis, Tenn., has accepted the presidency of the West Tennessee Normal School at Memphis.

A. C. Barker, former superintendent of schools at Oakland, Cal., has received the honor of a membership in the Phi Beta Kappa Society, a national organization whose members are chosen because of distinguished scholarship and educational attainments.

Dr. W. B. Howard, deputy superintendent of schools of San Francisco, Cal., for the past seventeen years, died June 24th at a local hospital following a stroke of paralysis. Mr. Howard was 63 years old.

Supt. T. M. Gilland of Donora, Pa., has enrolled in the officers' training school at the University of Pittsburgh.

Miss Julia Rockafellow has been appointed principal of the high school at Waukesha, Wis. Miss Rockafellow was at one time county superintendent in Waukesha County and more recently has been instructor in the local high school.

Miss Norma M. Watson, who since 1911 has been librarian of the Martins Ferry Public Schools and secretary to Supt. W. A. Walls, died on June 3.

In her position, Miss Watson came in contact with hundreds of pupils in the community, and endeared herself to all by her unfailing courtesy and kindness.

The Loeb board of education of Chicago, whose right to reinstatement has been upheld by the action of the Supreme Court of Illinois in declaring the incumbent board to be illegally in possession of the school offices, has announced that it will seek possession.

Angus Roy Shannon, former attorney of the board, and Lewis E. Larson, former secretary and business manager who were dismissed following the seizure of the board rooms last fall, have also prepared to regain their offices. The present incumbents have been warned that they will be held accountable for acts performed by them while in office.

SCHOOL BOARD NEWS

Reorganization of the board of education of San Francisco, Cal., along the lines recommended in the Claxton survey report is proposed by the Public Educational Society. The society proposes to submit a petition to the supervisors in the form of a charter amendment to be presented to the voters at the fall election. The two outstanding features of the amendment are as follows:

1. The board is to consist of seven members, to serve without pay, instead of the present four who receive $3,000 a year.

2. The superintendent is to be a qualified teacher and an expert in educational matters and is to be employed by the board instead of elected by the people.

The proposed change regarding the organization of the board reads:

The school department shall be under the control and mangement of a Board of Education composed of seven school directors, who shall be appointed by the Mayor. They shall serve without compensation. They shall be citizens who are not less than 30 years of age, who have been residents of the city and county for at least five years prior to their appointment, and who have not during such five years been members of the teaching staff or held any salaried positions in any public or private school system or school, it being the purpose of this section that the Board of Education shall represent that part of the community on whose behalf educators are employed. The term of office of the directors shall be seven years.

The change pertaining to the superintendent is as follows:

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U N D E R W O O D

The Superintendent of Schools shall be the executive officer of the Board of Education. He shall be appointed by said board to serve during its pleasure.

The positions of superintendent and deputy superintendents of schools shall be deemed to require expert or technical training, and shall not be subject to any provisions of this charter prescribing residence qualifications for officers or appointees; provided, however, that during their incumbency appointees to such positions shall actually reside in San Francisco, and, in case any such appointee fails so to do, his appointment shall be forthwith revoked by the board.

Numerous other changes are planned. The leasing of school property is to be made to the highest bidder after due advertising, and at least five of the board of directors must concur before finally approved by the city officials.

The board of education of Kansas City, Mo., plans the establishment of junior high schools. The new arrangement is expected to bring opposition from principals and patrons because of the fact that pupils of the higher grades take high school subjects and athletic work and frequently begin a foreign language a year earlier.

The fuel administrator of Philadelphia has approved the school board's plan for saving at least 15,000 tons of anthracite coal next winter. The plan makes possible the use of a cheaper grade of coal for banking purposes and avoids the shortening of the school term.

Rock Island, Ill. The board has decided to handle all school books and will dispose of them at cost to the students, plus the transportation charges.

State Supt. Hyatt of California has rendered a decision to the effect that textbooks of the state must be used as accepted by the state board of education. The opinion was given in answer to a request of a teacher in Los Angeles that she be given permission to use some other book in music.

Fifty thousand children in Massachusetts have been taken from the schools during the past year and put to work in shops and factories, according to a report of the State Board of Education. The children range in age from 14 to 16 years and are made up mainly of those whose families are in need of their earnings because of war conditions.

The schools of Decatur, Ill., have experienced a loss of 700 students over last year. The reduction in students means eventually a loss of $2,000 to the schools.

In a decision recently rendered by the District Court of Devils Lake, N. D., the right of school officials to enforce the vaccination law of the state is upheld. The decision was given in the case of Dr. W. F. Rhea, chiropractor, against the board of education, in an action to compel the board to admit his son to school without vaccination.

St. Joseph, Mo. The board has rented a piece of ground from the Union Terminal Company upon which it has erected two large sheds for the storing of coal. The sheds are built, one on each side of the railroad track, and coal may be unloaded from either side into the sheds. Two thousand tons of coal will be stored in school bins and three thousand tons will be reserved for the sheds.

The school board of Clinton, Mass., has named each of the school buildings after a deceased member of the board.

A general reorganization of the school system of Oakland, Cal., has been made upon the suggestion of Supt. Fred M. Hunter, resulting in the dismissal of eleven teachers and the reassignment of several others. A division of the duties of the supervising head of the Oakland Technical High School has been made, W. F. Ewing being given charge of the business affairs of the school and P. M. Fisher of the educational affairs.

Minneapolis, Minn. The board has decided not to rescind the rule prohibiting the use of school buildings for political meetings.

Dr. John D. Hilton, chairman of the joint school board of Swansea and Somerset, Mass., has resigned to enter army Y. M. C. A. work.

Benjamin Bourne, member of the school board of Peoria, Ill., has been called in the draft.

Dr. Minnetta Flinn-Jordan has been elected to the board at Wabash, Ind. She is the first woman to hold office.

Daniel R. Cameron, widely known as a business man and educator in Chicago, died at his home in Altadena, Cal., where he had gone for his health. Mr. Cameron was for sixteen years a member of the board of education and was twice elected president.

Arthur Fisher has been appointed business manager, and Charles L. Bush, superintendent of buildings and grounds, for the board of education at Evansville, Ind.

E. H. Andrews has been appointed secretary of the board of education at Three Rivers, Mich.

Wm. H. Brogunier has been appointed purchasing agent of the school board at Rockford, Ill. In addition to his duties as purchasing agent, Mr. Brogunier will supervise the janitorial force.

William Harkness, for eighteen years a member of the board of education of Brooklyn, N. Y., died at his home on June 8th, at the age of 77. Mr. Harkness was appointed to the board in 1879 by Mayor Howell. He had charge of the construction of the Girls' High School and the Boys' High School and was responsible for the organization of the Teachers' Training School.

Miss Dorothy Dowding has been appointed clerk of the school board.

Dr. Thomas H. Lewis of Western Maryland College, has been appointed president of the Maryland State Board and William T. Warburton of Cecil County, vice-president.

The school board of Harrisburg, Pa., has re-elected Secretary D. D. Hammelbaugh and Purchasing Agent Frank C. Foose.

F. L. Bensinger has been elected secretary of the school board of Franklin, Pa., for his fifteenth consecutive term.

Dr. R. M. Bolenius has been re-elected secretary of the board at Lancaster, Pa.

A. W. Moss has been re-elected secretary, and George B. Heycock supply clerk, of the school board at Wilkesbarre, Pa.

HIGH SCHOOL ADMINISTRATION.

The high school of Haverhill, Mass., experienced a decrease in enrollment during the school year. Starting last September with an enrollment of 1,045 students, the number was gradually reduced to 800 students when school closed in June. It is expected that the enrollment in the fall term will not exceed 950 students. The falling off is mainly among boy students who are attracted by the demands for their services and the high wages paid.

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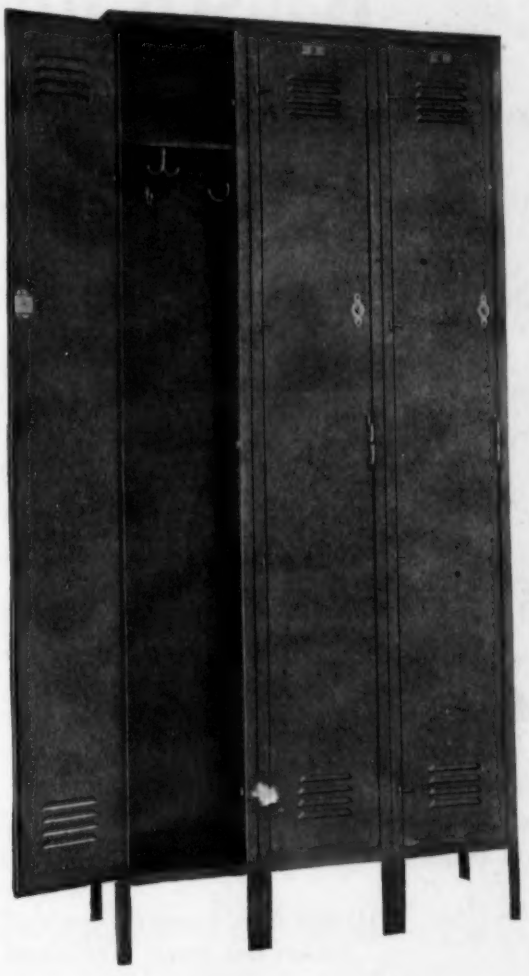

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TEACHERS and SCHOOL ADMINISTRATION

Springfield, Mass. One hundred teachers engaged in summer industrial work during the vacation as a means of solving the labor shortage.

Teachers in Oklahoma are required to sign an oath of allegiance before they are appointed to a teaching position.

A special committee of the state board of education of Pennsylvania, has been named to enact a law providing for payment by the state, in addition to the present school appropriation, to every district in the state, at least one-fourth of the salaries now paid by such districts to their teachers. It has been shown that increased cost of living requires more pay for teachers, and many districts have been unable to hold teachers because of the war emergency.

Baltimore, Md. An attempt was recently made to introduce into the board a resolution permitting women teachers to marry men in government service, and to retain their positions during the war, or as long as the board saw fit. It was suggested that such a rule would relieve the shortage of teachers.

The Bureau of State Research of the New Jersey State Chamber of Commerce has issued the first part of its report on the investigation of teachers' retirement systems in the state. The report was prepared by Paul Studensky, supervisor of the investigations of the Bureau and presents an analysis of the history of the systems from the time of their establishment.

Among the changes introduced in the fund by legislation, the most important were the provision of the law of 1907 making membership in the fund compulsory for all new entrants and the provision increasing the rate of contribution. The contribution required is two per cent, two and one-half per cent or three per cent of salary, according to the length of service of the teacher at the time he enters the fund. The present rate is inadequate to meet the cost of the benefits. As a compulsory membership, it was intended by the leaders of the fund to serve to increase the revenues. It was not realized that while an increased membership means additional contributions and increased revenues, it means at the same time increased liabilities, and since the contributions are unsufficient, an increased actuarial deficiency.

The monograph asserts that no further makeshifts in financing the fund of the state pension would improve the situation and that a reorganization on an actuarial basis is urgently needed. Then the writer raises the question whether this reorganization should be effected separately for each system or whether the systems should be consolidated into one. A separate reorganization would involve for the teachers the necessity of carrying all the burden of the future liabilities of the fund and supplying the many millions needed to cover its past deficiencies. On the other hand it would involve for the state the necessity to appropriate perhaps as much as $1,000,000 annually for the support of the state pension system on a reserve basis and the duplication of benefits would continue.

If, on the contrary, a single system were established and supported by joint contributions, the burden upon either party might be considerably less and the system could "meet the economic needs of every member of the system, effectively relieve the schools of superannuated and disabled, insure the efficiency of the teaching staff and benefit the public at large."

The second part of the report will deal with present conditions, as revealed by the investigations of the Bureau's experts.

Cincinnati, O. The board has ruled that teachers of German must qualify as English teachers or suffer the loss of their positions. About 28 teachers are affected by the rule.

Indianapolis, Ind. Teachers in the public schools are required to sign an oath of allegiance before they may be appointed to teaching positions.

Supt. C. L. Wright, of Huntington, W. V., has compiled a report showing that seven and one-half per cent of the pupils of the elementary schools failed of promotion in the second semester. This record, according to Mr. Wright, is the second best since the system of determining scholarship by teachers' semi-annual reports was devised. It provides that semi-annnual reports shall be submitted to the superintendent, showing the percentage by school and grade of those who have failed to meet requirements. Explanations must be attached by the teachers so that provision may be made for readjustment suited to individual cases.

It has been found that the system benefits not only the pupil but the school patron and taxpayer. It overcomes the over-age handicap and makes it possible to help the retarded pupil before the year has ended. It is estimated that in cost alone, the system has saved the city over $18,000.

The splendid schools of Salt Lake City have been the pride of the citizenship for the past two years. Modern pedagogy and combined advanced methods of education as carried out under the direction of Supt. E. A. Smith have attained a degree of efficiency in training the young which has been gratifying to parents. Under Mr. Smith's energetic administration, parents and teachers have been brought closely into contact and the schoolhouse has become a civic center for the city.

Some of the important school movements instituted by Dr. Smith which have been especially gratifying to citizens have been the domestic science for junior grades, the training given in manual training, the night schools for foreigners and the night business courses for those who cannot attend in the daytime.

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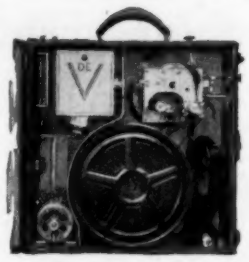

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HARTWELL TO BUFFALO.

Ernest C. Hartwell, of St. Paul, Minn., on July 8th, was unanimously elected superintendent of schools at Buffalo, N. Y., at a salary of $7,000 per annum. Mr. Hartwell's name was decided upon following a consideration of one hundred eligible educators. Mr. Hartwell entered upon his duties August first.

Ernest Hartwell was born in Albion, Michigan. He received his education in the public schools of Albion and in Albion College. Later he attended the University of Michigan and the State Normal College, receiving the degrees of A. B. and M. Pg.

Mr. Hartwell's professional career began at the State Normal College, when he accepted a teaching position shortly after leaving the University. Before going to St. Paul, he was superintendent of schools at Sault Ste. Marie and at Petoskey, Mich. He also had charge of departmental work in the high school at Cedar Rapids, Ia. He had been superintendent at St. Paul for the past two years.

Mr. Hartwell is a contributor to several educational magazines and is the author of two books on school subjects entitled "Teaching of History" and "Manual for Guitteau's Government and Politics of the United States." At present Mr. Hartwell is the president of the Department of Superintendence of the National Education Association.

MR. GROUT ELECTED AT PORTLAND.

D. A. Grout, assistant superintendent at Portland, Ore., on July 5th was elected superintendent of schools to succeed L. R. Alderman, who becomes Director of War Work.

Mr. Grout was born in Canada and is a graduate of the Elgin, Ontario, Model Training School for Teachers, and of the Ottawa, Canada, Normal School.

In 1890 he came to Oregon. He served as principal of the North Central School for five years, principal of the Atkinson School one year and of the Park School for ten years. He is a graduate of the University of Oregon law school.

In April, 1906, Mr. Grout was elected principal of Washington High School and in July he was made assistant superintendent of schools.

LONGANECKER ELECTED AT RACINE.

F. M. Longanecker of Parkersburg, W. Va., has been elected superintendent of schools at Racine, Wis., to succeed B. E. Nelson. Mr. Longanecker entered upon his duties August first.

Frank M. Longanecker was born in Ohio. He is a graduate of Hiram College and of the University of Michigan. He was a teacher of Latin at the Fayette Normal School from 1899 to 1901 and assistant in Latin at the University of Michigan from 1903 to 1904. He filled the position of principal at the Texas Christian University and at the Charleston High School. From 1909 to 1912 he was supervisor of examinations for the West Virginia Department of Education. In 1912 he became principal of the high school at Parkersburg and two years later he was elected to the superintendency.

F. M. LONGANECKER
Superintendent of Schools, Racine, Wis.

Dr. William Fairley, principal of the Commercial High School at Brooklyn, N. Y., died July 9th, at his summer home in Massachusetts. He was a graduate of Amherst College and of the University of Pennsylvania.

Supt. F. E. Spaulding of Cleveland, O., will sail August 10th for France, where he will act as a member of the commission which is to organize and conduct a war zone school for soldiers of the American expeditionary force. The plans for the school are the work of Mr. Anson Phelps Stokes of Yale University and have the approval of General Pershing.

J. R. Morgan, for the past sixteen years connected with the schools at Trinidad, Colo., has resigned. He was appointed superintendent in 1908.

Supt. J. L. Smith of Lincoln, R. I., has been re-elected.

Supt. C. J. Koch of Baltimore, Md., has given up his vacation pleasures and has entered the government shipbuilding plant in the city. He recently completed a preliminary course in shipbuilding at an eastern plant.

John Alleman of Greensburg, Pa., has been elected temporary superintendent at Uniontown, Pa., to act in place of Supt. C. N. McCune who is in the government service.

A readjustment of school boundaries in a number of the school districts of New York City is proposed by Supt. Wm. L. Ettinger in order to make a more satisfactory division of duties and responsibilities among the superintendents. It is proposed to assign a superintendent to every four districts in certain sections and in others to appoint one for every district, the assignments to vary according to conditions.

H. M. Corning, principal of the Rice school at Trinidad, Colo., has been elected superintendent of schools to succeed J. R. Morgan, resigned. Mr. Corning is a native of Pennsylvania, a graduate of Dickinson College at Carlisle, and was formerly superintendent at Newport.

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A3069 10-in.—75c	**Hunsdon House.** Country Dance—English. (Cecil J. Sharp.) Prince's Band.	**The Old Mole.** Country Dance—English. (Cecil J. Sharp.) Prince's Band.
A3070 10-in.—75c	**Newcastle—Heartsease.** Country Dances—English. (Cecil J. Sharp.) Prince's Band.	**If All the World Were Paper—Parson's Farewell.** Country Dances—English. (Cecil J. Sharp.) Prince's Band.
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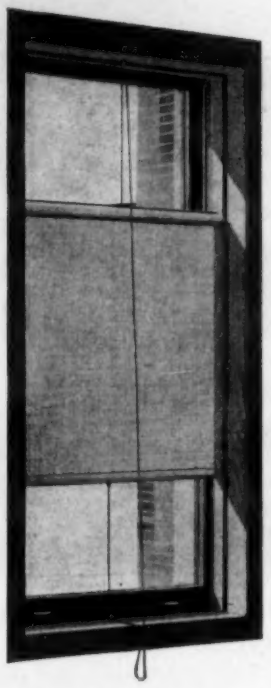

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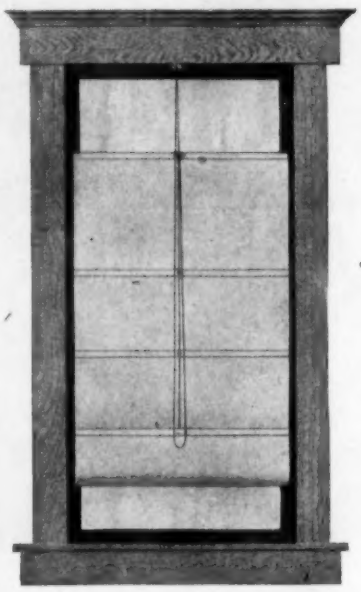

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"Whenever conditions will permit, the physical exercises should be conducted on the playground."

"Two double periods per week should be considered a minimum for this work. These exercise periods of ninety minutes twice per week should be supplemented by play periods after school of at least one hour, and, of course, by the regular recess periods and setting-up exercises between class periods."

"Grounds and gymnasiums are practically useless unless they are kept equipped for activities."

—Extracts from Bulletin No. 50
U. S. Bureau of Education.

We have "Everything for the Playground."
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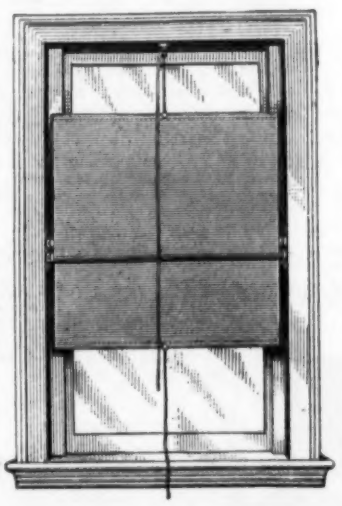
Should give maximum light with good ventilation

TWO SHADES AT CENTER OF WINDOW PERMIT PROPER REGULATION OF LIGHT



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SYSTEM OF ILLUMINATION

Save our children from wearing glasses

Fully 10% of our 20,000,000 school children have defective eyesight, says the United States government.

Most of this trouble is due to poor lighting.

Not so much to *insufficient* lighting, mind you, as to *poor* lighting.

Do you realize that even in a brilliantly lighted schoolroom it may be difficult for a child to see?

The explanation is simple. If a bright light shines in the child's eyes, the size of the pupil of the eye may be reduced so greatly that the child cannot see its work even if this is brightly lighted.

This is the reason why it is even more important to control light properly than to generate it abundantly.

To save our children from the necessity of wearing glasses, be sure *your* schools are equipped with Holophane Reflectors. They shield the eye and direct the light where it is needed.

Our book, "Scientific Illumination for Schools," will enable you to judge the value of your present lighting system. Send for it. It's free.

Holophane Superficiency Reflector
Used in many well-lighted schools

Holophane Glass Co.
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THE WAR AND THE SCHOOLS.

Lane Technical High School of Chicago recently won first place in the Liberty Bond campaign of the schools, with a total of $672,600 to their credit. In the war recreation fund drive they also won first place, with a fund of over $2,750. The school has sent 350 boys to the farms of Illinois.

Students of the Philadelphia high schools have been organized into a so-called Junior War Workers Corporation for work upon small parts of marine engines being built for the Emergency Fleet Corporation. The plan is to accept subcontracts from marine or other machinery contractors at a proper figure. Money earned by the corporation, not actually paid out in wages, is to be re-invested in new machinery or applied to other needs. Workers will be given a minimum wage of $11.50 per week.

Chester, Pa. Four thousand workers at the Chester shipyards recently undertook an evening course in shipbuilding under the direction of the board of education. The work is in charge of Mr. F. H. Baker, Jr., of the training department of the shipyards and classes are held five nights each week. Men without a knowledge of English are taught to speak and read English properly.

Kansas City, Mo. The close of the war savings stamp campaign has shown that a total of $200,456 in sales was due to the work of 40,000 children in the schools. Benton led the ward schools with sales amounting to $30,530.

The public schools of Buffalo, N. Y., sold $180,000 worth of war savings stamps during the recent stamp drive.

Fifty high school boys of Boston have enlisted in farmwork. The boys will work until October 12 and will be presented with honor badges after they have completed the term of service.

The total amount of Liberty Bonds of the third issue, sold thru the schools of the state of Illinois was $10,998,900. Of this amount, Chicago schools sold 7,781,300 and Cook county, outside of Chicago, sold $1,066,650. The fifty dollar Liberty Bond offered by Mrs. Frank O. Lowden, to the elementary city or village school selling the most bonds in proportion to enrollment was won by the Elkhart School. Aroma Park Township High School, in Kankakee County, won the prize for selling the most bonds thru high school students.

Joplin, Mo. A radio buzzer school has been established by the board. Classes are held six days a week.

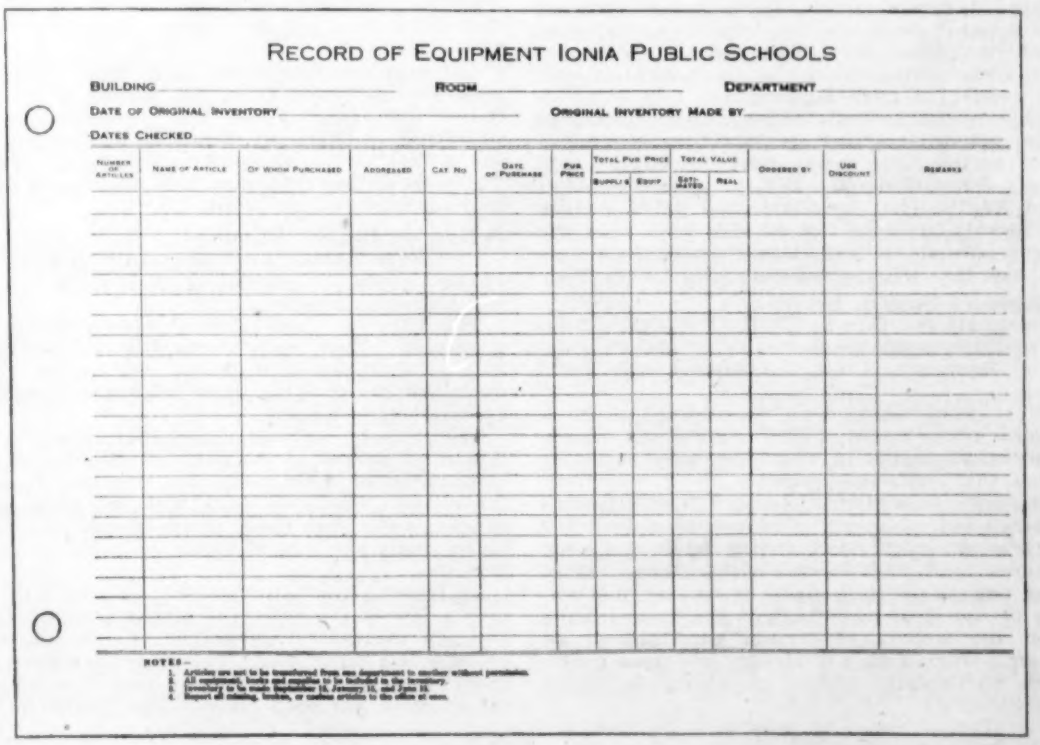
AN INVENTORY AND STOCK SHEET.

The accompanying illustration is a small reproduction of the loose-leaf form used in Ionia, Michigan, for keeping a complete record of the equipment in the several school buildings of the community. The original sheet measures 10 by 14 inches and fits a standard binder.

The form permits of a complete record of all articles of permanent furniture and equipment in each school building. Space is provided, as an examination of the cut will reveal, for a history of each item, for an estimate of its present value and for a statement of its condition.

The blank is made out each year in June and is rechecked in September and January. A copy is kept in each principal's office and in the office of the superintendent of schools.

The sheets have been found to be a complete check on all school materials and to afford a ready means for appraising school property. The sheet was prepared by Mr. A. A. Rather, Superintendent of the Ionia Schools.



RECORD OF EQUIPMENT IONIA PUBLIC SCHOOLS

BUILDING _____ ROOM _____ DEPARTMENT _____

DATE OF ORIGINAL INVENTORY _____ ORIGINAL INVENTORY MADE BY _____

DATES CHECKED _____

NUMBER OF ARTICLES	NAME OF ARTICLE	OF WHOM PURCHASED	ADDRESSED	CAT. NO	DATE OF PURCHASE	PUR PRICE	TOTAL PUR PRICE SUPPLIES	TOTAL PUR PRICE EQUIP	TOTAL VALUE EST. MATED	TOTAL VALUE REAL	CHECKED BY	USE DISCOUNT	REMARKS

NOTES—

1. Articles are not to be transferred from one department to another without permission.
2. All equipment, books and supplies to be included in the inventory.
3. Inventory to be made September 15, January 15, and June 15.
4. Report all missing, broken, or useless articles to the office at once.

RECORD FORM FOR SCHOOL EQUIPMENT, IONIA, MICH.

THE TENTH EDITION OF OUR CATALOG IS NOW READY

Our new catalog illustrates and describes our **guaranteed laboratory furniture** for chemistry, physics, biology, physiography, domestic science, domestic art, pathology, hospitals, and industrial plants. It also contains complete lines of domestic science utensils, and tools and benches for manual training.

If you are interested in **high grade laboratory furniture,** we guarantee satisfactory service. Our goods are designed right, made right, and delivered right.

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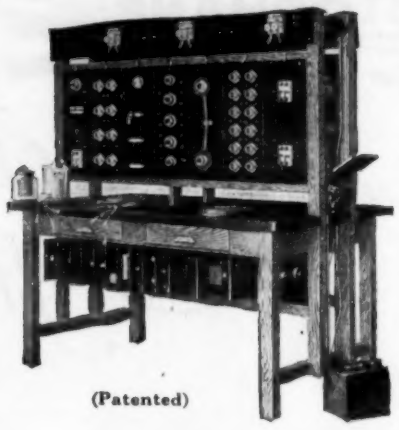

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Kewaunee Electrical Laboratory Equipment

This is a most adequate, yet simple and economical unit for teaching practical and theoretical electricity. It permits the performance of more than sixty experiments. It is especially designed for High School classes.

We are equipped to supply all demands, from the smallest school requirement to the largest demonstration purpose—for class or lecture room work, general laboratory practice or individual experiments.

The School of Engineering of Milwaukee,

so well known throughout the United States for its practical electrical course, and the Kewaunee Mfg. Co., so well known for its superior laboratory equipment, have collaborated in the production of this line of Electrical Equipment.

See our exhibit at the Fourth National Exposition of Chemical Industries, Grand Central Palace, New York City, Week of September 23d.

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Book Reviews

Kipling Stories and Poems Every Child Should Know.

Book I. Edited by Mary E. Burt and W. T. Chapin. Cloth, 142 pages; illustrated. Price, 44 cents, net. Houghton Mifflin Company, Boston, New York, Chicago.

This Jungle Book and Just So Stories are books to dream over. These editors—one of whom is a woman who has long done intelligent work in editing fine literature for children—have here carried out the happy thought of editing something from Kipling.

Short paragraphs at the beginning of many of these selections either explain the selection a little or tell how it was voted for in the children's School Council. Bennie, aged 5, couldn't read English, but he could read every picture in Mowali Brothers and he will soon read the words. We do not find "How they let the Jungle in," but that will perhaps appear in Book Two.

Longman's English Lessons.

Books III and IV. By George J. Smith. Cloth, 58 and 106 pages respectively. Price, 30 cents each. Longmans, Green & Company, New York, Chicago.

Since these books have been prepared by a member of the Board of Examiners of the Department of Education in New York they naturally follow that city's requirements.

Many features of these books attract attention and call out approval. The questions upon the pictures are very much to the point and good pictures need and deserve close study. Since clear enunciation is not one of the cardinal virtues of American speech, there are needed drills upon the sounds of certain combinations of letters. Work with a dictionary and upon quotations—particularly broken quotations—is rather individual.

Ingenious exercises, good paper, use of different kinds of type to bring out distinctions in thought, are other happy features.

War Addresses.

By Woodrow Wilson. Edited by Arthur R. Leonard. Boards, 129 pages. Ginn and Company, Boston.

All the President's war addresses and messages up to June, 1918, are included in this timely book. The editor has added a biographical sketch of the president and an estimate of his literary work. The notes which conclude the book, clarify references by stating facts and quotations from official documents bearing on the war.

Economy in Food.

By Mabel Thacher Wellman. Cloth, 36 pages. List Price, 30 cents, net. Little, Brown & Company, Boston.

A timely and important little book. Indeed, opinions and facts from the author of "Food Study" are authoritative. Its theme is economy in buying, in character of recipes, in cooking, in use of fuel, in storing foods and planning meals. The table of food costs may help the general public to think in terms of calories.

A Concise English Grammar.

By George Lyman Kittredge and Frank Edgar Farley. Cloth, 235 pages. Price, 72 cents. Ginn and Company, Boston.

The adjective *concise* in this title is not a misnomer. This book shows that a grammar may be complete, if it be not over-loaded with non-essentials or with work belonging to other departments of English.

The table of contents shows that in part one is a rapid survey of the parts of speech and an explanation of their substitutes, the phrase and the clause. Part two deals with inflection and syntax, while part three treats of analysis. In an appendix are lists of verbs and tables of conjugation.

Aside from this bare outline it may be well to note a few of the especially strong points. The frequent mention of an author's name after an exercise is a happy idea. This mention will often arouse interest in the article or book from which the exercise has been taken. The treatment of adverbial objective, infinitives, infinitive phrases, participles is clear and thoroly sound. The fine exercises upon *shall* and *will*, *should* and *would* bring out the proper use of these frequently misused auxiliaries. Italicized words call attention to main points, while a full index makes the contents of "Concise English Grammar" easily usable.

Applied Business Calculation.

By C. E. Birch. Cloth. The Gregg Publishing Company, New York.

To teachers who realize the importance of rapid, accurate calculation in number work, "Applied Business Calculation" will carry an appeal. Everyone is aware that in the counting room and the business office the demand is for young men and young women who have such a mastery of the four fundamental processes and their use in business computation that their work is always marked by speed and accuracy.

This handy pad presents ninety-five drills and ninety-five tests, together with plans for final examinations. The typographical arrangement of each exercise will save much valuable time for both teacher and pupil, for it dispenses with the necessity of copying examples. As the Drill and Test on each sheet constitute the work of a single recitation, it is evident that a good share of a lesson period could be consumed by a pupil in copying the examples before solving them. This pad, therefore, renders the time devoted to number work doubly effective by enabling the teacher to use the entire period of the recitation for intensive instruction and by allowing the pupil to give uninterrupted thought to the task before him. The use of the fundamental processes with whole numbers, fractions, and decimals is thoroly drilled in abstract form and in their application to business transactions. Short cuts to results are given, and many new and practical speed devices are introduced. The factor of time is emphasized in each test as a result of accuracy in the drill lessons. The exercises are entirely practical and may be used to supplement a textbook, or independently. The plan of the entire series of exercises involves the four steps (1) Teaching; (2) Practice; (3) The Test; (4) Review.

COMPLETE DOMESTIC SCIENCE EQUIPMENT

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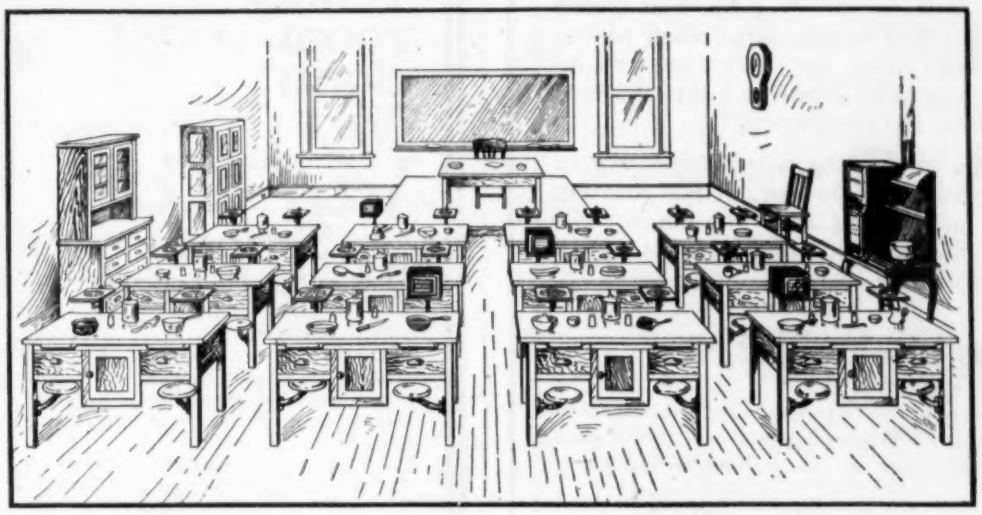

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Buy All your Domestic Science Equipment from us. You will find we can furnish everything you require and save you time and money.
Just send us a sketch and dimensions of the room you intend devoting to Domestic Science work and we will furnish you the equipment best suited to your purpose and show you the most efficient way of installing it.

If you are conducting classes in Domestic Science you may need partial equipment. No matter what your requirements, we can furnish them and save you money. We are the largest house specializing in LUNCH ROOM equipment and supplies. Are you planning on a school lunch room? If interested write for information. Our representative will call upon request.

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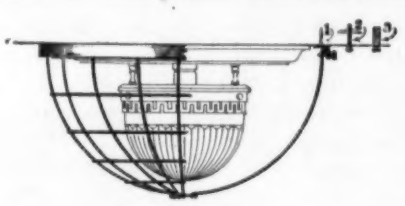
PROTECTIVE GUARD FOR LIGHTING UNITS.

The Luminous Unit Company of St. Louis, Mo., has recently developed a new type of guard for lighting units known as type BDX, which may be installed to protect any of the well-known models of Brascolite, and which is suited to protect any other make of lighting unit which can be contained within it. The new guard is an improvement over the type BD Brascolite,

which is equipped with a wire guard that covers the lamp and the diffusing bowl and that is furnished as an integral unit only.

Guards have been found necessary in certain buildings and rooms enclosing lighting units because of the liability to breakage of the incandescent lamps and glassware. For example, experience has shown that the glassware and lamps installed in school gymnasiums, squash-courts, over swimming pools and in certain shipping rooms and warehouses is subject to excessive breakage



unless adequate mechanical protection is provided. In gymnasium the breakage occurs especially during hand-ball and volley-ball games. When the fixtures are installed over swimming pools the water-polo balls are liable to rupture the glassware.

As shown in Fig. 2, the Type BDX guard is supported by an angle iron ring which is drilled with four holes to provide for fastening to the ceiling. The ring is entirely independent, mechanically, of the lighting unit which is to be protected. Therefore, when strains are imposed on the guard, they are not transmitted to the lighting unit. The hemispherical wire cage is held to the ring with four knurled-head set-screws. These permit the easy removal or replacement of the guard in cleaning and lamp removal. The guard proper is made of mild steel wire, electrically welded at the junctions. Screws of any of three different types can be used for supporting the guard ring to the ceiling. As shown at "1" (Fig. 2) wood screws are supplied when it is specified that the ring is to be mounted on a wood or a plastered wood-lath ceiling. When it is specified that the ceiling is of metal-lath or hollow tile, toggle bolts as indicated at "2" are supplied. Expansion bolts will be shipped when it is specified that the ring is to be installed on a concrete, stone or glazed brick ceiling. These guards are made regularly in four different sizes of the following outside diameters: 13", 18", 21", 25". They can be used respectively with bowls of the following outside diameters: 10¼ or 11", 14, 15 or 16", 18 or 19", 22 or 23". The Brascolites for which these guards can be used are the Types AD, WD, NB, FE and IB.

Full information and prices may be had by addressing the Luminous Unit Co., St. Louis, Mo.

PETERSON'S NEW LABORATORY CATALOG.

The rapid growth of the sciences has induced the firm of Leonard Peterson & Company of Chicago to specialize in the manufacture of high grade furniture for all kinds of laboratories. Experience, combined with frequent conferences with acknowledged authorities in science, has enabled the company to furnish equipment that is in keeping with the growing demands of the sciences and industries, in educational and scientific schools as well as the laboratory of the industrial plant.

As a recognition of this growth in the science business, Leonard Peterson & Company have issued the tenth edition of their laboratory catalog. The calalog contains several new designs of furniture, museum cases and cabinets, and many kinds of miscellaneous apparatus, and gives special attention to improved construction in laboratory furniture. Among the furniture listed may be mentioned chemistry laboratory tables, dark room tables, wall tables, apparatus tables, chemistry fume hoods, physics and biology laboratory tables, work benches, desks and chairs, aquariums, germinating beds, microscopes, supply cases, exhibit cabinets, display cases, domestic science tables and stoves, sinks, supply tables, serving counters and miscellaneous equipment and supplies of a varied nature.

School boards and teachers of the sciences who are interested in equipment of this character should address Peterson & Company at 1234 Fullerton Ave., Chicago.

NEWS OF SUPERINTENDENTS.

J. G. Norby of Fergus Falls, Minn., has resigned to accept the position of State High School Inspector.

Supt. Homer P. Lewis, of Worcester, Mass., has been appointed by the governor as a member of the special commission which will make a study of the educational system of the state.

E. J. Bodwell, of Lincoln, Neb., has been elected superintendent of schools of Ames, Ia., to succeed F. W. Hicks.

Supt. J. B. Richey of McKeesport, Pa., has been re-elected for his eighteenth consecutive term.

TRAIN FOR THE FUTURE

Printers' ink has done as much to prepare us to win a victory in the World's War as any other single factor. It has made possible a large army, the success of two Liberty Bond issues, and has welded into a compact whole the various races that form our population.

The greatest value of printing will be apparent in the reconstruction days following the war. Upon printing and its hand-maidens, advertising and journalism, will largely devolve a re-development of the enterprises that have been destroyed during the struggle.

Printing as a School Subject

Printing is the logical subject to be taught in the public schools. It's future is assured. Wages are practically stabilized; the demand for workers is great; the opportunities for advancement are unlimited.

Now is the time to Install an Outfit

The Superintendent of Schools of your city has probably recommended school printing outfits. If so, it shows he is progressive and possessed of a vision that is looking into the future. For the sake of the children in your charge carry out his recommendation.

EDUCATION DEPARTMENT

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It keeps the School room clean. The Vul-Cot School Waste Basket

is neat and sanitary.

It is easily emptied and the solid sides and bottom prevent paper scraps, pencil shavings and other miscellany from littering up the school room floor.

But equally as important as looks is the excellent service one gets from a *VUL-COT* Basket. They are thoroughly dependable and will easily outlive their

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This exceptional long life makes the *VUL-COT* Basket an economy of such importance that a careful study of its numerous good points is well worth the time of anyone interested in the purchase of school supplies.

The *VUL-COT* Waste Basket though light in weight is very hard and tough. It will not dent, crack or split, nor will it rust or corrode. It is fire-resisting and is practically boy proof.

If your stationer or supply house is not yet carrying *VUL-COT* Baskets, write to us for catalog.

Used by Schools and Boards like these:

Culver Military Academy, Culver, Ind.

Public Schools of Harrisburg, Pa.

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Board of Education, Pittsburgh, Pa.

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266 King St., W. Toronto, Ont.

PLANNING THE WAR-TIME SCHOOL-HOUSE.

(*Concluded from Page 40*)

west; it could not face north, for example, because then the rear windows would look directly into the all-day sunny glare. So, in such case, the school at Rinard, Iowa, (figures 5 and 6) would be better. Of course, the stairways should be enclosed, and fireproofed; but that is an easy matter to arrange. The assembly and gymnasium are somewhat lower than the rest of the basement floor, so as to give good ceiling-height; the stairway, you'll notice, runs on down to this level. The locker-rooms and showers for boys and girls, are excellent features; but these force the toilets to the upper floors, which isn't quite so good, to my mind. Wardrobes in each classroom take the place of cloak rooms. As actually built, the second floor of the Rinard school was divided into a large study hall with lesser recitation rooms, etc.; so that strictly speaking, the building was only a six-room one. As Commissioner S. A. Challman has pointed out in the January SCHOOL BOARD JOURNAL, any arrangement of separate study and recitation rooms requires more floor space than the modern scheme of using each grade-room for study and recitation, at different periods; the teachers or scholars shifting about from room to room, every hour.

However, it is perfectly possible to slightly rearrange the Rinard school, as in figures 7 and 8, getting eight full classrooms, besides laboratory, domestic science room, manual training shop, teachers' room, principal's office, etc.; the end of the boys' toilet room is raised, so as to permit a passage-way beneath, from the girls' stair to the assembly. The plan is reversible; if the lot faces south, the former rear may be swung around to the front. A little skill on the part of the architect will produce a very good front elevation here. You'll notice, too, that I have shown small dressing-alcoves in the girls' locker-and-toilet room; frankly, I think this is a very desirable feature, for several obvious reasons.

Getting away from the ordinary type, we come to the school at Spring Valley, N. Y.; figures 9 and 10. This building cost $34,861.00, all complete, in 1916; probably the price would be quite a little higher today. If you may need a larger school, in a few years, this is the plan to follow; for additional rooms can be strung on indefinitely, two at a time, either at the right or left, and stretching away to the rear. The assembly room arrangement is very clever, indeed; folding chairs are set out in the first story hall, the partition to the central classroom is folded back—and there you are! The two stairways are excellently placed; tho, if properly fireproofed and enclosed they would have to be brought out flush with the projecting central part of the building. I haven't shown the basement; it holds the usual domestic science and manual training rooms, besides toilets, heating plant, etc.

Now I'm greatly tempted to show some of the wonderfully beautiful and convenient one-story buildings; the 8-room Kennedy School at Portland, Oregon, for example. Well, anyway, here's a picture of the Kennedy School; but I'm afraid it will make most of us mighty unhappy to look at it. For the Kennedy School cost nearly $50,000; and the board that can scrape up even half of that sum, is mighty lucky, these war-time days!

LONG BEACH WAR ACTIVITIES.

Supt. W. L. Stephens of Long Beach, Cal., has issued a report on the interesting war activities carried out in the schools. The membership in Junior Red Cross is 6,467 or about 94 per cent of the student body. The sum of $3,180 was raised for Red Cross Work, the pupils purchased thrift stamps to the amount of $25,040 and the teachers purchased stamps to the amount of $2,369. A total of 1,823 pupils purchased Liberty Bonds amounting to $209,738 and 241 teachers purchased bonds to the amount of $54,250. There are 1,460 boys and girls engaged in war gardening, with 155 acres of land under cultivation.

The products of the Junior Red Cross department included knitted goods, gun wipers, toys, bread boards, knitting needles, shipping boxes, clothing and surgical bandages.

The manual training department of the high school completely fitted up the Junior Red Cross room in the bungalow for the use of the high school classes. The boys constructed the furniture for the room, also furniture for the Red Cross convalescent houses and tables for the Y. M. C. A. camps. At the local Red Cross headquarters the boys built closets, shelves, walls and office space and assisted in the erection of the new building for the headquarters.

In the classrooms every opportunity was utilized for bringing before the pupils speakers of national and international reputation who could talk on the war, its causes and conduct. Lessons were given on problems in arithmetic, current events and other subjects as outlined in the leaflets and publications issued by the National Department of Education.

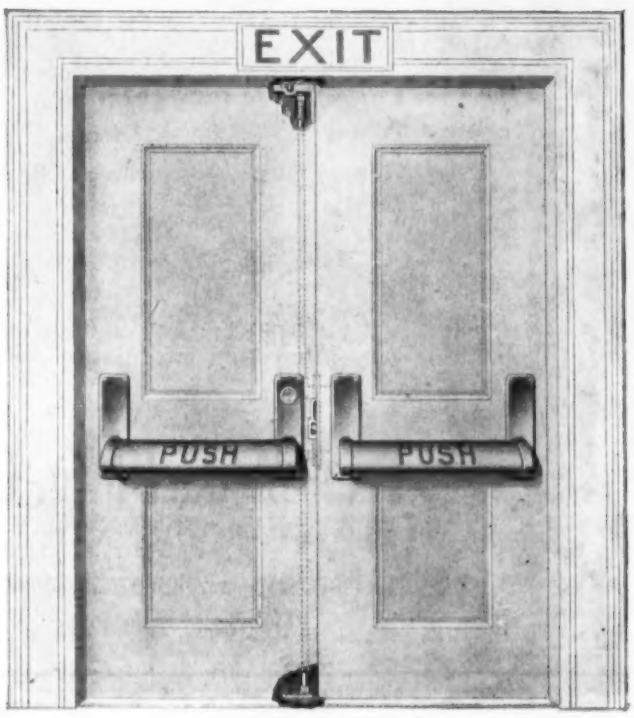
SUMMER SCHOOL NOTES.

A special teachers' summer course in current history, dealing with the war was opened July first in the Washington Square Building, New York City. The courses are conducted under the personal direction of Dr. C. C. Pearson of Wake Forest College and are under the joint auspices of the New York University and the National Security League.

New Orleans, La. Summer classes in commercial subjects have been opened at the Wright and Esplanade Avenue High Schools. The courses are intended to train women for vacancies in business offices.

Safety provided in every point

Quick exit is assured and the construction is such that in operating the push bar the hands or arms cannot be caught between the bar and the door.



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Fire Exit Door Bolts

are attractive in appearance, strong in construction and quick in action.

They have a wide push bar which projects only $2\frac{1}{2}$ inches from the surface of the door, permitting the door to swing wide open so as not to obstruct passage through the doorway. Slight pressure on the bar at any point will release the bolts instantly. All edges and corners on the bars and brackets are carefully rounded, eliminating all possibility of wearing apparel becoming accidentally caught.

Sargent Fire Exit Door Bolts, Locks and Hardware are sold by representative dealers in all cities.

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Sanitary Toilet Partitions

New Vitrolite Toilets, Jefferson Grade School, Red Wing, Minnesota

Whether remodeling or building new you should know about the new "VITROLITE Sanitary Toilet Partition" now being used in the finest schools in the country. It is a partition especially adapted for schools. Snow-white, good looking and non-absorbent, it is the best kind of health insurance. Germs cannot permeate nor organic acids altar its beautiful smooth surface. VITROLITE is fire-resisting, harder than marble and will wear for ages.

The partition is so constructed that it is proof against damage from shocks and floor settlement.

VITROLITE is widely recognized and used because of its sanitary qualities in hospitals. It cleans as easily as china and is ideal for lunchroom table tops and domestic science laboratories.

Every School Trustee, Secretary and Superintendent owes it to himself to at least know about VITROLITE.

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are installed, as shown below, a part of the Three Thousand Five Hundred

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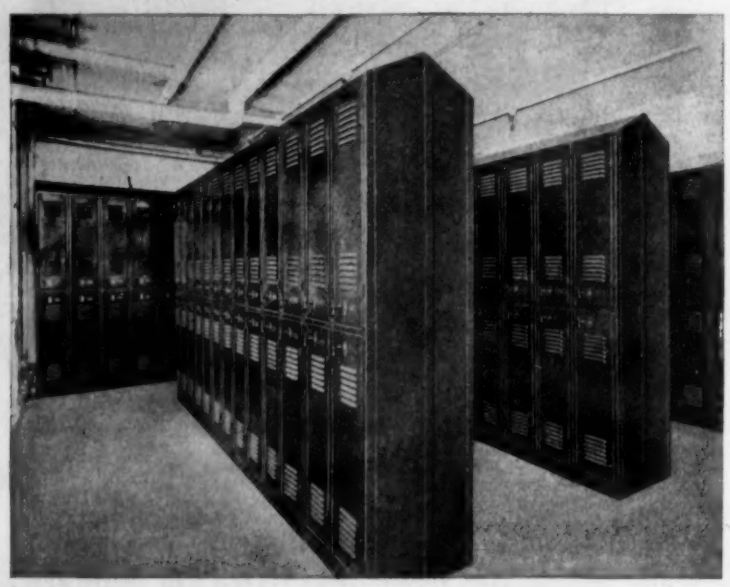

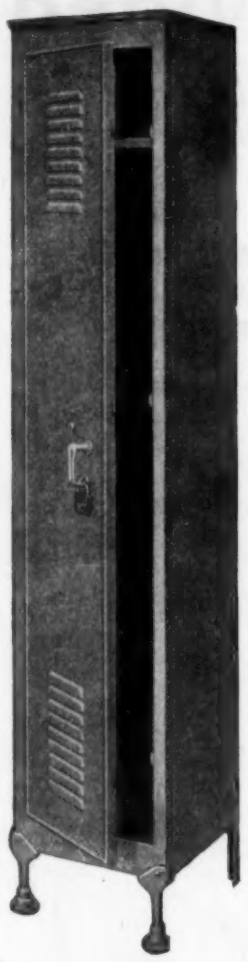

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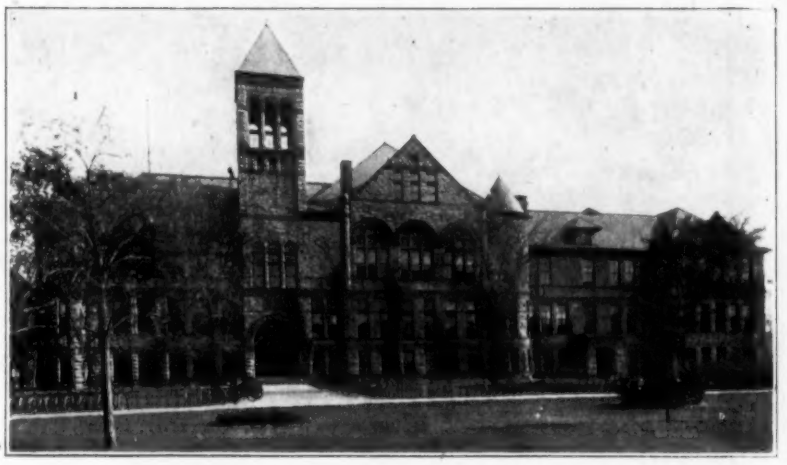

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A PROGRAM FOR POWER PLANT SAVING.

The United States Fuel Administration, thru its educational bureau, has begun a national campaign for improving the economic co-operation of steam power plants.

The slogan of the campaign is "Maximum production with minimum waste," and the objective is the saving of from ten to twenty per cent of the fuel used in the United States for power purposes, or from twenty-five to fifty million tons of coal per year. It will be possible for boards of education to co-operate with the fuel administration in accomplishing this vast economy thru the improved operation of school steam plants.

The fuel administration is appointing state administrative engineers who are to direct the inspection of every power plant in the country. For the personal inspections, the fuel administration will utilize the services of inspectors of steam boiler insurance companies, state factory inspectors, engineering students and volunteers.

Questionnaires have been prepared by the administration, and these will be sent to all power plants. Depending upon the efficiency of methods used in any plants, rating will be recorded by the inspectors with the assistance of the questionnaires. It is planned to arrange four classes of plants, based upon the efficiency of the apparatus and the efficiency of operation. Plants that are wastefully operated will be compelled to improve their methods, and the fuel supply may be reduced or even shut off entirely, as the judgment of the state fuel administrators seem to warrant.

It is, of course the intentions of the administration to be as helpful as possible and to suggest thru the inspectors, methods for improving the handling of power plants, and for economizing in fuel. The fuel administration has prepared a fifty minute film of moving pictures, showing good and bad operation in steam boiler plants, methods of testing boilers, etc. These pictures will be available for use in educational propaganda. The administration is also preparing a series of bulletins on engineering phases of steam and fuel economics. The following are some of the first which will be issued:

Boiler and furnace testing, flue gas analysis, saving steam in heating systems, boiler room accounting systems, saving steam and fuel in industrial plants, burning fine sizes of anthracite, boiler water treatment, oil burning, stoker operation.

School boards who may be interested in obtaining any of the literature of the fuel administration, and who are desirous of co-operating very closely, may direct their correspondence to the state fuel administrators in their respective commonwealths.

SCHOOL FINANCES AS A WAR-TIME PROBLEM.

(*Concluded from Page 38*)

matter to a gathering of the principal manufacturers of the country. He said: "The building construction and plans of the United States Government, incidentally, are some 20 per cent right now in excess of the total building construction of the United States for the three-year period 1915, 1916 and 1917." He went on to say that plans "are advancing into 1919 and 1920," and he declared to the intelligent body addressed that he thought the construction plan of the Government was "far beyond the impression of almost any of you." Mr. Replogle's statement is a revelation to most of us and should have full consideration.

We should remember, however, that our good friends the school architects have not made any material advance in their commissions for preparing plans and specifications and the wise board of school directors in districts where new buildings are needed, will employ an architect and have their plans drawn and ready for the contractors' bids when the word is flashed that Kaiser Bill and his blood-thirsty Huns have been forced to sue for peace and the war is at an end.

And finally, I appeal to school authorities all over the land to stand for efficiency in the public schools, to oppose the lowering of the standard in any manner, to have the courage to make such advance in tax levies as may be required to meet advance in the cost of the maintenance of the schools. The school board member who does these things faithfully is a true patriot and is performing for his country a great service in these critical times when men of intelligence and courage are needed.

PATRIOTISM AND POCKETBOOKS.

(*Continued from Page 37*)

pane. In Fig. 1 is shown a vertical section and in Fig. 2 a horizontal section of a common wooden window sash indicating how the glass is set in, and how the natural drying out of the wood of the sash during the season of artificial heating causes the sash to pull away from its frame and thus to leave cracks and openings thru which the cold outside air leaks into the room.

If an additional pane of glass is set in flush with the inside edge of the sash, and held in place by narrow metal strips with felt packing as shown in Fig. 3, a "double glass" window is produced and the glass heat loss is cut in half. This is because the insulating air, having glass with room temperature on one side and glass with outside temperature on the other, assumes a temperature which is the mean of the two and, as the transmission of heat from the room to the insulating air is only proportional to the temperature difference, the transmission will be just one-half as much as the single pane.

(*Concluded on Page 63*)

Summer courses for teachers have been opened at the University of Pennsylvania, Philadelphia. The courses are free to qualified students and are under the direction of William C. Ash, principal of the Philadelphia Trades School.

Ready August I.

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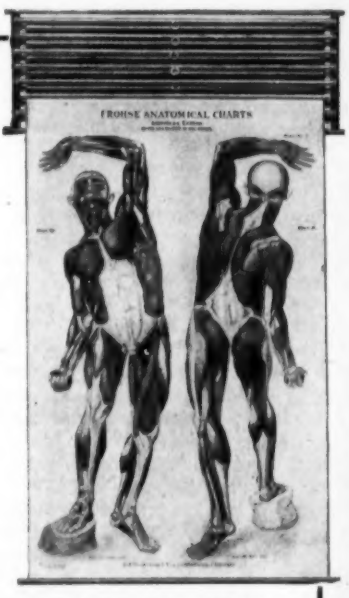

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L. PLAUT & COMPANY

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(*Concluded from Page 61*)

If artificial heat is kept on for six months out of the year the heating hours will be

6 x 30 x 24 = 4320 hours.

With an average outside temperature of 35° for the heating period and an average room temperature (including days, nights, Saturdays, Sundays and holidays) of, say 55°, the average difference in temperature is 55° — 35° = 20°. It has already been shown that the glass loss (600) is twice the wall loss (300) or 2/3 of the total *radiation* loss (900). Therefore, the cutting of the glass loss by 50 per cent will reduce the room radiation loss from 900 to 900 — (600 x 50% = 900 — 300 = 600 which is a saving of 300/900 = 33 1/3 per cent on the radiation loss.

How many pounds of coal is thus saved by double glass? On the average classroom, involving, as has been shown, a glass area of 150 sq. ft., the heat loss during the heating season would be (with an average difference between inside and outside temperature of 55 — 35 or 20°)

1 B.T.U. x 150 x 20 x 4320 (hours) = 12,960,000

This reduced 50 per cent would be 6,480,000 B. T. U. and at 8000 B. T. U per lb. of coal

6,480,000/8000 = 810 lbs. of coal per annum per classroom.

Turning back to Figs. 1 and 2 it will be noted that at certain joints between the frame and the sash and also between the upper and lower sash at the meeting rail arrows indicate the inflow of cold outside air. Experience has shown that air leakage for a room amounts to about one air change per hour and at the very least 75 per cent of this comes in thru the windows (as indicated by the arrows) and the balance thru the walls. The only way this leakage can be prevented is by weather stripping.

There are many types of stripping but the three general styles are indicated in Fig. 4. In this drawing A is a wooden moulding in which is inserted and glued a rubber or felt strip. Its application to a window is illustrated in Fig. 5. B is a similar lighter moulding with a thinner composition of cloth and rubber doubled so as to form a compressible surface to take up inequalities when the sash slides past the strip. Its application is shown in Fig. 6. Both of these types of weather stripping rapidly deteriorate when subjected to rubbing on the surface, but are very satisfactory for fixed sash and to close joints where the parts are immovable. With both of these types the closing of the joint at the meeting rail is very difficult and usually gives unsatisfactory results.

In Fig. 4, C illustrates a zinc metal weather strip which is made to set in a groove slotted into the wooden sash. Its application to the sides of the sash is shown in the horizontal plan, Fig. 7, and its application to the top, bottom and meeting rail in Fig. 8. With such stripping the leakage at the meeting rail can be effectually handled and, the metal being harder than the wood, wears but little. Its life probably is equal or, at least, nearly equal to the life of the window.

Good weather stripping should stop at least two-thirds of the window leakage which, if the conservative figure of 75 per cent of the total is considered, gives a saving on the total room leakage of about 75% x 2/3 = 50 per cent as the average room under consideration has

30 x 25 x 15 = 11,250 cu. ft.

and the normal air leakage is one change per hour the leakage during a heating season of 4320 hours will amount to

4320 x 11,250 or 48,600,000 cu. ft.

This cut in half will be 24,300,000 cu. ft. which must be warmed (during the heating season) and as one B. T. U. will warm 55 cu. ft. of air one degree each cubic foot will require an average of 20/55 B. T. U. or 4/11 B. T. U.

24,300,000 x 4/11 = 8,800,000 B. T. U. (roughly), and at 8000 B. T. U. per lb. of coal this is equivalent to saving 8,800,000/8000 = 1,100 lbs. of coal or about one-half ton per classroom.

With 810 lbs. saved by double glass and
1100 lbs. saved by weather stripping

the annual saving per classroom will be 1,910 lbs. or approximately one ton. On other rooms the saving will be proportional.

Some may wonder at the expediency of spending thousands of dollars on the installation of expensive ventilating systems and then the weatherstripping of the windows to prevent leakage. In regard to this it might be said that the ventilating systems are designed to give a proper air supply to each and every pupil with no attention paid to the variable leakage factor. Such being the case the leakage is supplying just so much additional cold, dusty and untreated air which constantly tends to cool off the room as long as such expensive and undesirable infiltration exists.

THE DEPARTMENT OF SCHOOL ADMINISTRATION.

(*Continued from Page 35*)

lor's paper will appear in an early issue of the Journal. Mr. Marvin E. Griswold, member of the board of education at Erie, Pa., read a paper on "School Budgets in War-Time." He described in detail the budget system employed in

(*Continued on Page 65*)

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(*Continued from Page 63*)

Erie, Pa., where splendid results have been obtained thru the complete co-ordination of the budget with the accounting system employed in the schools. "School budgets," said Mr. Griswold, "should be worked out along scientific lines and should anticipate in detail every expenditure of the schools."

"Uniformity in School Accounting" formed the subject of a paper read by James Storer, secretary of the Buffalo board of education. Mr. Storer argued that school accounting should be as scientific as the accounting done in business houses so that every element of school expenditure can be determined. He argued for the adoption of the uniform system which has been worked out by the National Association of School Accounting Officers in co-operation with the Bureau of Education and the National Education Association. He described the technical requirements of the New York state system of uniform accounting which follows in the main, the accounting plan of the National Association of School Accounting Officers.

The high point in the morning session came in the address by Mrs. Charles A. Perkins, president of the board of education of Knoxville, Tenn. Mrs. Perkins chose as her subject "The Responsibility of the Board of Education from the Standpoint of a Woman Member." She declared that the responsibility cannot be overestimated because it involves the welfare of the schools and leaves her responsible for the educational welfare of the rising generation which is to constitute the nation at a future date. School boards are not the places for incompetents or politicians. The best men and women of a community should be chosen for membership and they should serve without compensation and in a most unselfish spirit.

School board members, she said, should be free to speak and to vote fearlessly and every action should represent their best thought and endeavor. Their vote on a school problem should be an intelligent vote, a result of actual knowledge and personal investigation. No problem should be passed perfunctorily but should be passed for the welfare of the community at large and for the welfare of the children and of the school system. A member of a school board who votes without knowledge and information violates his oath. It is morally wrong to pass on school matters which are not well thought out or studied. At the present time it is one of the most important responsibilities of boards of education to overcome illiteracy in the United States. This duty may be performed in part by enforcing the compulsory attendance laws and in part by providing instruction for adult illiterates. There are in the United States at present five and one-half million illiterates and four and one-half million persons over 20 years of age who can neither read nor write. The recent disclosures of the draft show that large numbers of young men who have been compelled to enter military service cannot write, cannot read orders given to them and are a detriment to the efficiency of the national army. Mrs. Perkins closed with a plea for keeping up the efficiency of the schools during the war so that they may be truly an instrument of home defense.

School Architecture.

The preliminary report of the Committee on Standardization of Schoolhouse Planning and Construction occupied the entire time of the third session of the Department. The committee has studied a sufficient number of school buildings so that a number of tentative conclusions could be drawn. It may be confidently expected that the committee will present to school boards and architects a series of tests for schoolhouse plans which will revolutionize the methods of selecting plans and enormously increase the efficiency of new schoolhouses. It is certain that the present disparity in the requirements of the several states in the matter of classroom sizes, corridor and stair widths, will be removed or at least reduced within a very short period of years.

Mr. Frank Irving Cooper, Chairman of the Committee, at the session in the Oakland M. E. Church, read a report of progress of his committee. He emphasized the patriotic duty of studying the efficiency of school buildings as a measure of conservation. He called attention to the varying regulations of different states as a handicap to building. "Why should it be possible that the fine schools of Massachusetts would be closed by law if they were built in Vermont? He appealed to the National Education Association as the vital force which could abolish such absurdities thru its nation-wide influence. This is a duty that we of today are bound to perform for the children, who tomorrow will take our places."

Mr. Cooper finds that one-half the floor area of a school building is all that today is likely to be available for purposes of teaching, but shows how by standardized planning this amount can be considerably increased. Many schools, especially grade schools, fall considerably below the normal of fifty per cent, some as low as 37 per cent, with a very few modern buildings at sixty or above.

Mr. Cooper finds that modern architects are putting thought into their plans so that space that was formerly wasted is now available for instruction.

The Committee finds that heating and ventilating is a very uncertain matter, varying as a matter of fact from one and one-half to fifteen per cent of the total floor area, one of these apportionments being ten times the other. This indicates lack of wise planning and much waste of space. It finds likewise no fixed authoritative opinion on halls and corridors, while matters of hygiene seem to be regulated on a "hit-or-miss principle."

(*Concluded on Page 67*)

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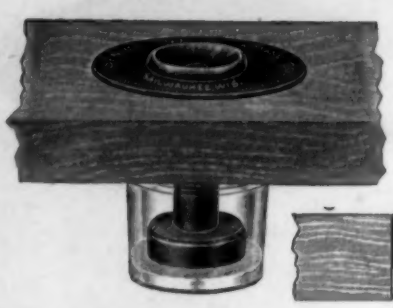

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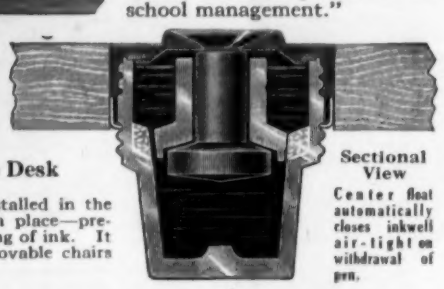

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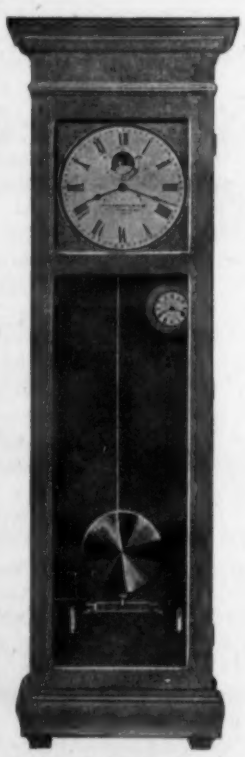

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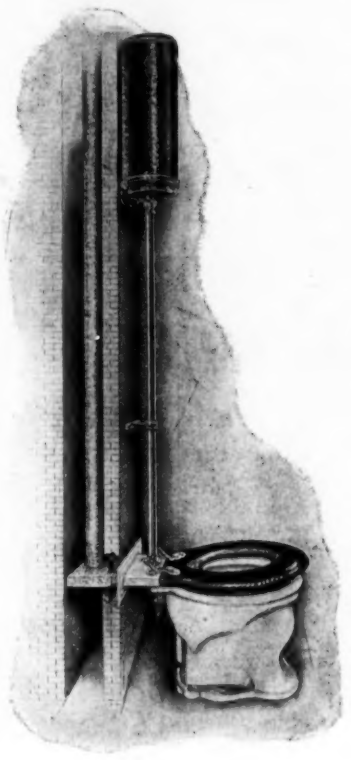

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And still there are the old, unsanitary, unsightly plumbing fixtures that threaten the health of every boy and girl in your school.

Toilet fixtures must be right, and you, Mr. Schoolman, have the power to demand that the right kind of fixtures be installed.

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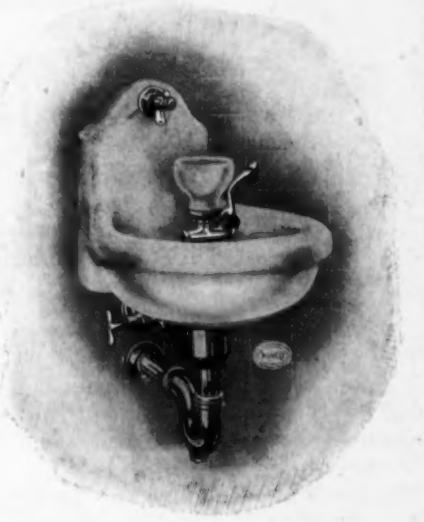

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N. O. Nelson Mfg. Co. Edwardsville, Ill. St. Louis, Mo.

NONCO

(*Continued from Page 65*)

"What might have been" was a graphic presentation of the added efficiency that could have been secured without additional cost had proper study been made of the planning. An interesting showing was the effect of the shape of the schoolhouse on its efficiency. This study is still incomplete.

"Since hundreds of thousands of men and young people," said Mr. Cooper, in conclusion, "must in the next few years receive intensive training to fit them for their duties, it is necessary for us—a real war duty—to raise to the utmost the efficiency of the school building."

Mr. Cooper was followed by Prof. Frank N. Freeman of the University of Chicago, who presented the results of a series of experiments on the amount of illumination required on the printed page. From Mr. Freeman's studies, it appears that far less light is required for accurate reading and work than is ordinarily supposed. While the Illuminating Engineering Society argues for three to nine candle-foot strength of light on a reading surface from one to two seem sufficient. Mr. Freeman's experiments have, however, not advanced sufficiently for definite conclusions. The study will be continued during the year.

Mr. John D. Cassell, of New York City, read a paper on heating and ventilating standards and argued for the adoption of such systems as are applicable to local situations. He declared that the ideal system is that which approaches the natural as near as possible. No heating system can be successful unless it receives intelligent, continuous attention.

In the discussions which followed, Mr. James O. Betelle of Newark, N. J., argued for the application of the committee's standards to state laws; Mr. Dwight H. Perkins of Chicago, argued that the standards be translated into rules which are applicable to actual problems met daily by architects; Mr. H. B. E. Eicher of Harrisburg, Pa., related progress on a valuable experiment in the planning of war-time temporary schools. These are so arranged that they are to cost only $1,250 to $1,400 per classroom and can be transformed without reconstruction into permanent buildings.

Standards of Efficient Health Administration for Schools constituted the subject of a brief paper read by Mr. J. H. Berkowitz of New York City. In this paper the author urged a standardized room for medical inspection and for school clinics.

Dr. W. S. Small of the U. S. Bureau of Education, Dr. Geo. W. Gerwig of Pittsburgh, and Mr. A. E. Winship, Editor of the Journal of Education, took part in the final discussions.

The department elected as officers for 1918-19 the following:

President—Mr. Albert Wunderlich, Director of Schools, St. Paul, Minn.

Vice-President—Dr. Geo. W. Gerwig, Secretary of the Board of Education, Pittsburgh, Pa.

Secretary—Wm. C. Bruce, Milwaukee, Wis.

UNIFORMITY IN THE CLASSIFICATION OF SCHOOL EXPENDITURES.

(*Concluded from Page 30*)

Total Expense of Maintenance of School Plant.

V. Auxiliary Agencies and Sundry Activities—

(Subdivided across the page into columns headed: 1, Total; 2, Salaries; 3, Other Subjects.)

(A) Libraries—
1. Salaries and expense (other than books).
2. Books.

(B) Promotion of health.
(C) Recreation.
(D) Provision of lunches.
(E) Community lectures.
(F) Social centers.
(G) Care of children in institution, private schools, and schools of other civil divisions (exclusive of tuition).
(H) Other auxiliary agencies and sundry activities.
(I) Operation of buildings used by auxiliary agencies.
(J) Maintenance of buildings used by auxiliary agencies.

Total Expense for Auxiliary Agencies and Sundry Activities.

VI. General Expense—

(Subdivided across the page into columns headed: 1, Total; 2, Administration; 3, Instruction; 4, Operation; 5, Maintenance; 6, Auxiliary Agencies.)

(A) Interest on debt—
1. Bonds.
2. Short term loans.

(B) Pensions.
(C) Rent.
(D) Insurance.
(E) Taxes.
(F) Telephone.

Total General Expense.

B. CAPITAL OUTLAY—

(Subdivided across the page into columns headed: 1, Total; 2, Administration; 3, Instruction; 4, Auxiliary Agencies.)

I. Land.
II. Buildings and Equipment—
(A) New Buildings—
1. Buildings.
2. Improvements of grounds.
3. Equipment.
(B) Alterations to old buildings.
1. Buildings.
2. Improvements to old grounds.
3. Equipment.

Total Capital Outlay.

C. REDEMPTION OF DEBT, REFUNDS AND CONTINGENCIES—

I. Redemption of debt—
(A) Payment of bonds direct to bondholders.
(B) Payments to sinking fund.
(C) Redemption of short term loans.
II. Refunds.
III. Contingencies.

The "Ultimate" in Sanitary Fixtures

for School Playgrounds

WATROUS SANITARY PLUMBING FIXTURES PATENTED DUOJET

for School Buildings

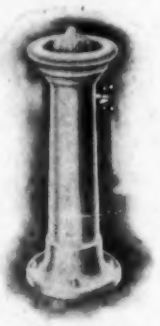
The name "Watrous" on drinking fountains, lavatories, closets, urinals, liquid soap fixtures, etc., indicates a master achievement in the manufacture of sanitary, most efficient plumbing equipment. Special attention has been paid for years to the needs of public institutions. Self-guarding of the health underlies the principle of superior construction in all Watrous products.

Practical and Economical

Watrous Soap Fixtures are made in a number of serviceable styles. Easy to install and to fill. Do not drip. Economy of operation that is surprising.

Best results are obtained from use in the fixture of Watrous Liquid Soap. A superior grade of easy flowing, pure, cleansing soap prepared under our supervision.

Best for Schools



The Watrous pedestal drinking fountain is made of heavy, indestructible vitreous ware. In design most beautiful and symmetrical and free from corners and crevices. So easy to keep clean.
The water shoots out from the bubbler by an easy turn of the key. Also furnished with loose key stop for continuous flow.

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Prevent Dangerous Diseases
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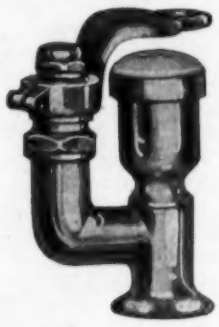


We are so accustomed to the drinking cup that we never stop to think as Dr. Irwin says, "That it causes the spread of disease more effectively than any agency I know of."

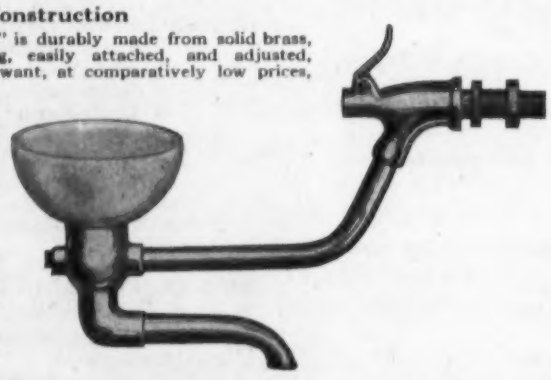
The cup is positively prohibited in twenty-seven states and most cities. SIX HUNDRED germs have been found about the lips of a single person. They are deposited on the cup by one person to be swallowed by the next user. "20th Century" Sanitary Bubbling Fountains positively prevent infection or the spread of disease in this manner.

Where Used

"20th Century" Sanitary Bubbling Fountains are used in country and city schools, churches, streets, parks, public buildings, cemeteries, trains, depots, factories, business houses, offices, apartment buildings, stores, etc.

Construction

The "20th Century" is durably made from solid brass, positively non-squirting, easily attached, and adjusted, made in any style you want, at comparatively low prices, fully guaranteed against defective material or workmanship and has been giving perfect satisfaction in the United States and Foreign Countries for many years.



We will gladly send you a sample for examination. If it's not satisfactory return it. Send for catalogue and prices.

Twentieth Century Brass Works
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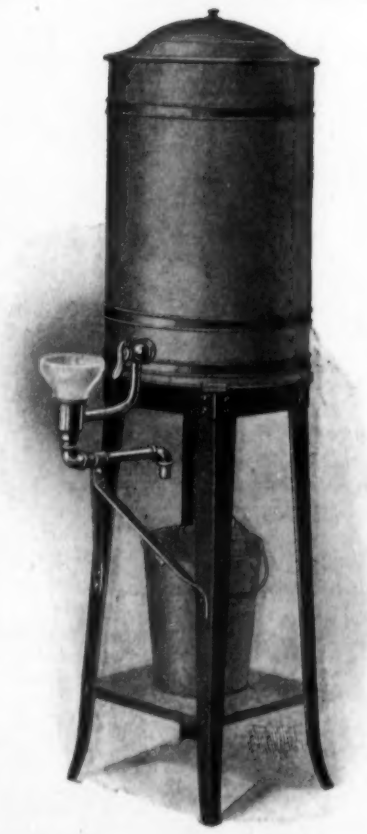

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Are you going to get along indefinitely with drinking equipment which breeds germs and diseases? Isn t it worth the small expenditure to know you are protecting the health of your pupils?

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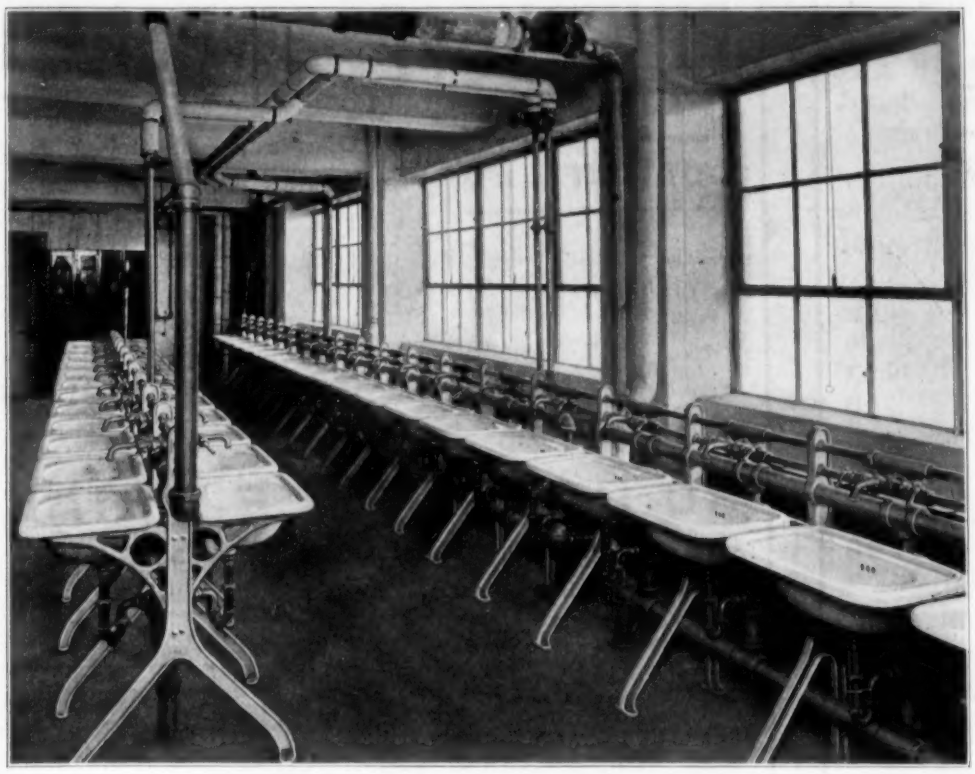

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In factories, business houses and schools follows the installation of high-grade plumbing, which insures the best sanitation and improved working conditions.

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ACCREDITING SECONDARY SCHOOLS.

(*Concluded from Page 29*)

That secondary schools regard the accrediting by the association as a distinct honor is attested by the applications for enrollment, and by the continued accessions, in number, of these schools. Last year, 1917, the total number of accredited schools was 1,165, among which were 87 schools of a non-public character. Of these last, 47 were schools attached as preparatory departments to institutions of higher learning, five were parochial schools, six were military schools, and 29 were purely private schools. The specific reasons why such large numbers of secondary schools of all types seek accrediting privileges of the association may perhaps best be given in the language found in the foreword of the bulletin issued last year. These are:

"It is therefore a distinct honor for any institution to hold affiliated or accredited relationship with this body. The association's official recognition gives prestige to a school among educated men and women everywhere. Its recorded approval is a letter of introduction to all colleges, universities and professional schools in the land, and guarantees efficiency and high standing to these institutions. Accredited relations with the association bring to a secondary school the same distinction and honor as an institution that membership in the society of Phi Beta Kappe or Sigma Xi confers upon an individual, or that high rating by Bradstreet or Dun brings to a firm in business. Moreover, membership in the association aids boards of education to secure better prepared teachers, to erect barriers against untrained teachers, and in general to raise educational standards in their communities. It is the hope of the association that all schools which are accredited by it will cherish the honor and seek to uphold the standards mutually and co-operatively established."

One additional honor and advantage accorded to secondary schools that sustain accrediting relations with the North Central Association is to be found in a recent action taken at the University of Michigan. Within recent years, as is well recognized among all educators, secondary schoolmen have shown more or less restlessness and dissatisfaction with the extent and kind of correlation that has existed, in some quarters, between the universities and the secondary schools. Principals have desired greater freedom in outlining units of work, in determining qualifications for graduation, and in making recommendations of pupils to colleges. To meet this seemingly legitimate request and desire the college of literature, science and arts of the university of Michigan a year or so ago adopted the following resolution: "*Plan B.*. Graduates of schools on the approved list of the North Central Association of Colleges and Secondary Schools will be admitted upon the presentation of an unqualified recommendation covering not less than fifteen units, of which at least twelve must be from List I (the old academic group of subjects). Admission on this basis of recommendation may be granted also to the graduates of other especially approved schools."

Under this plan admission to the university depends solely upon the high school principal. If he is willing to graduate a youth from his school and vouch for him unqualifiedly at the university, such youth may be admitted irrespective of the subjects he has pursued in high school or the grades he has made in them, provided only he shall not offer more than three units from the so-called vocational group of subjects. The effect of this plan can as yet scarcely be judged. Few pupils or principals have up to date taken advantage of it. It, however, attaches new value to the accrediting and certificating system. It has a distinct psychological effect. It takes principals of high schools more completely into partnership with the university. It gives them the freedom they have sought, without (so far as present practice reveals) endangering university standards. It puts responsibility where it rightly belongs.

In conclusion, therefore, it seems warrantable to assert, that the accrediting system in some form is a fixture in the administration of public education in America. It has brought about, and is bringing about, a close articulation between the two great divisions of our educational system—the common school and the university. The examination of the schools at regular intervals serves as a stimulus to progress in the schools themselves; graduates of accredited schools not only can enter institutions of higher learning without the worry and strain of examinations, but they can have the assurance that their high school diplomas will be accepted by various national, state, municipal, and private boards of administration; and finally the accredited schools enjoy a greater prestige in the local community and among educated men and women everywhere.

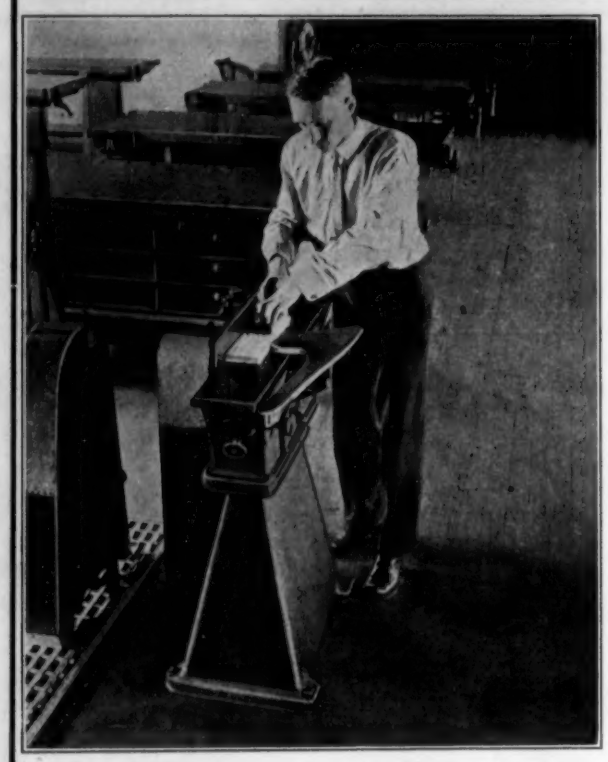
THE SCHOOL COTTAGE IN THEORY AND PRACTICE.

(*Continued from Page 26*)

the atmosphere of a house essential to a satisfactory development of the project.

The social worker employed for the district, is provided with an office, equipped to conduct her work. One of her projects involves the development of a music settlement for which the

(*Concluded on Page 71*)



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GUARANTEED Five years in a one or two classroom school — Two years in a three or four classroom school — One year in a five or six classroom school, or 60x60 store. Five years in a ten room home.

Being "Self-Moistened," this brush needs **no "Floor Powder" nor "Floor Oil,"** which **Saves $15 to $20 per Brush.**

30 DAYS' FREE TRIAL

We Pay Express Both Ways

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A satisfactory allowance on a new brush will be made if the brush you have paid for fails to fulfill all claims.

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A post card brings one at our expense.

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School Signal Systems

Protect the Children by

providing a distinctive, uniform and absolutely reliable fire signal which is always heard and obeyed

If the flat in which you live is a fire trap you can move out—

If you believe a certain hotel or theatre is unsafe you need not patronize it—

But—if the school in your city is in daily danger of becoming a fiery furnace—the law compels your children to attend, just the same.

Better be safe than sorry.

Send for our New Catalog No. 16301 without delay.

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OUR FACTORY IS WELL EQUIPPED TO MANUFACTURE SPECIAL FURNITURE FROM ARCHITECT'S DRAWINGS

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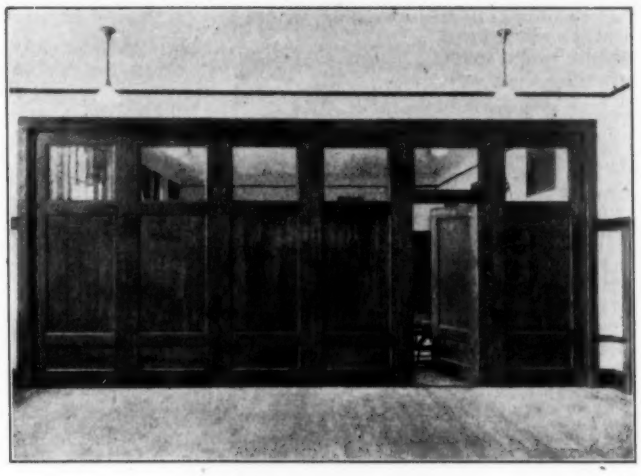
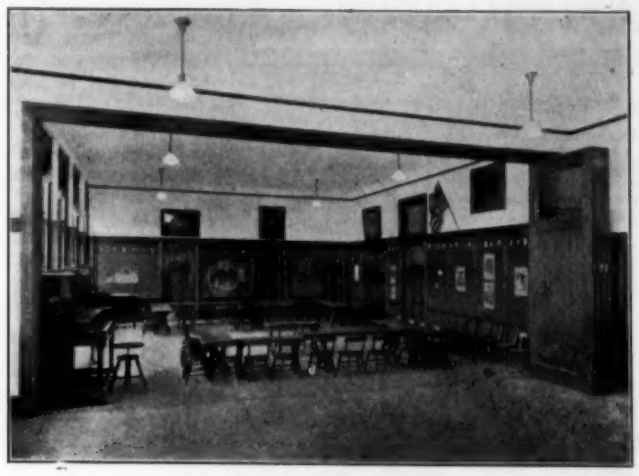


PARTITION DRAWN OUT



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THE WILSON FOLDING PARTITIONS DO NOT HANG

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Long or high partitions can be operated as easily as small ones.
It is impossible for a Wilson Partition to get out of order.

All runners and guides are ball bearing.
Slate blackboards and automatic folding chalk troughs for schools.
Automatic Adjustable Jambs allow for swelling or shrinkage of doors.

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THE J. G. WILSON CORPORATION

Manufacturers of Rolling Partitions, Hygienic Wardrobes and Diffuselite Blinds

8 WEST 40TH STREET NEW YORK, N. Y.

(Concluded from Page 69)

five rooms on the third floor furnish an ideal opportunity. Here volunteer workers give lessons on different instruments to small groups who desire such instruction. A small room on the second floor is used as a branch library for the district. The two bath rooms in the house furnish the basis for instruction in hygiene.

The structural changes in the building were comparatively few. Steam heat was substituted for the old hot air furnace and electricity in place of gas. The approximate cost of the necessary changes was as follows:

Heating	$1,000
Lighting	125
Carpenter Work	400
Painting and Decorating	550
Plumbing	300
Incidental	125
Total	$2,500

On the credit side must be placed the value of the three room space actually saved by these changes in the dwelling house. Under present conditions, a conservative estimate would place this at $8,000 per room or a total of $24,000.

The real value of the school cottage idea does not appear in the money saved, considerable tho it be. Its true significance is found in the opportunity to develop the socialized activities of the school in an environment the very antithesis of any traditional school.

A second land purchase was made in the Mt. Hebron district where a larger playground was desired. This school, like Baldwin St., required additional space for a steadily increasing enrollment. Instead of providing more classrooms, the board had the small dwelling house moved to the rear of the lot and remodeled for household arts instruction. The first floor was transformed into a large kitchen and the removal of partitions on the second floor provided a sewing room. The proximity of the house to the school made it feasible to heat both from the same plant. Better arrangements for household arts could not be secured.

Here too, the work of this department is carried on under conditions approximating those in the home. The total cost of moving the house and fitting it for the use of the department was $6,000. Two rooms in the school were released for regular classes. These would have cost at least $8,000 each, consequently the net saving to the city is $10,000. It is probable that the future cost of repairs and maintenance will be more than for the same space in regular classrooms. This will operate to reduce the $10,000 initial saving, but time alone will show how material this factor is. As a compensation for the extra maintenance cost there is the added efficiency of a household arts department, operated in the natural environment of a home.

The third house owned by the board of education came into its possession thru the purchase of the land for the erection of the present high school. The original purpose was to remove the house. Its location made the ground of little value and the industrial-arts department urged its retention as a fruitful field for concrete projects. The wisdom of this decision is no longer questioned. A few minor changes were made in the interior and it was then turned over to the art department to develop a harmonious scheme in house decoration. For a year this furnished intensely practical projects for the art classes and the completed plans have resulted in an artistically decorated house. A minimum amount of furniture was purchased to make the house usable and the wood working classes of the high school undertook to furnish the rest of the equipment as a part of their regular work. The mechanical drawing department has designed a clock, piano bench, lamps, and bedroom furniture. The actual construction of these articles will keep the regular classes occupied for the next year or two.

It is the purpose of the instructors to use all three of these cottages as a practice field for students in cabinet making, plumbing, electric light wiring, house painting and the other trades.

Even in its present condition, the high school finds the cottage a very satisfactory meeting place for the various literary clubs, organized under the direction of the faculty. The entire absence of the typical schoolroom atmosphere lends an interest and zest to club meetings, impossible to secure under ordinary conditions.

More and more the Montclair schools are getting away from the idea that household arts are nothing but cooking and sewing. The department provides girls with definite instruction and practice in homemaking.

The classes are divided into groups allowing the different members to serve in rotation as mistress, cook, maid and waitress. Sweeping, dusting and other household activities are carried on by pupils in the group.

Mothercraft classes are already receiving instruction in the proper care of infants. Experience indicates the necessity of such teaching, especially to children of foreign birth. These children carry home enthusiastic accounts of the things they learn about what to do and what not to do for the baby and the interested mothers come to see and hear for themselves. Real babies are occasionally loaned for demonstration purposes. A spirit of cordial co-operation between the home and the school is thus developed to the manifest advantage of both pupils and teachers.

QUESTIONS AND ANSWERS

This Department is conducted as a personal service for the readers of the Journal. Questions on school board problems, especially on the physical side of school administration, will be answered as promptly as possible by the department editors.

Only such questions will be printed as seem to be of general interest. Address correspondence to Editor, School Board Journal, Milwaukee, Wis.

Finishing a Rough Wall.

6. Q:—The concrete wall in the gymnasium was finished too rough when the schoolhouse was built last fall. What would be the best way that it could be given a smooth finish?—*C. W. S.*

A:—The best way? Well, that depends on a whole lot of things, especially in these costly war-time days. A certain method may be theoretically the best, but if you haven't the materials or the workmen at hand to carry it out, it isn't practically the best, by any means! So I'll suggest several different schemes and you can take your choice.

Naturally the first idea would be to plaster it with a finish-coat of hard white lime-and-sand mortar; or, if likely to receive rough usage, a coat of Keene's cement. Probably the wall is partly below grade, so to stop moisture it must be painted with one of the dampproofing preparations that are on the market. Be careful to get some sort that is made for use underneath plaster, and will stay sticky or "tacky;" I once specified a quick-drying paint and the plastering skidded off like a smooth-tired car on sleety asphalt!

However, plaster makes an awful mess of decent floors—and the manual training pupils aren't expert plasterers. Therefore, why not cover the rough concrete with wall-board? Strips of shingling lath, spaced about two feet on centers, can be clamped to the concrete with expansion bolts; over this furring, nail on the sheets of wall-board, and cover the joints with wood moulding. This will give you a mighty attractive paneled effect, at a small cost; and the boys can do the work, under your direction. A lot better training for them, than making bookcases—don't you think so? Instead of expansion bolts, you can drive hardwood plugs into holes drilled in the concrete, and nail the strips, hard and fast. If you prefer, 12-inch boards can be put on, instead of the wall-board; cover the joints with mouldings, stain the whole thing some dark mission tone, and you have a wonderful Old-English wainscot! I've used this scheme, more than once.

A cheaper and simpler way, however, would be to cover the wall with coarse burlap—just ordinary gunny-sack material—and paint this several coats. To make the fabric stick, smear the wall with a heavy dampproof paint; while still tacky, spread the burlay on and smooth it with a paper hanger's roller. If there is no risk of moisture, thick paste will answer in place of the dampproofing.

Some years ago I had occasion to design a basement billiard-room for one of my clients, so I put in concrete walls, dampproofed them, and then veneered the inside with a lining of picturesque, old-fashioned brick. These brick were set up on edge, and so gave the effect of 4" by 8" red tiles; of course, only about half as much material was required as a four-inch wall would have taken.—*William Draper Brinckloe.*

7-8-9. Q:—Answered by mail.

Floor Finish for Schools.

10. Q:—I have been an interested reader of the Journal for several years but I do not recall an article on the treatment of new floors in school buildings and care of same as they age. I have reference to wood floors of yellow pine and oak. I shall appreciate some information as we are just completing a new high school building and want the floors to be started properly.—*O. J. S.*

A:—In general, two types of satisfactory treatment are available for finishing yellow pine and oak floors.

The simplest and the most economical will preserve the floor and keep it easily clean, but will not absolutely prevent discoloration from dirt, etc.

This treatment consists of machine sanding the floor across the grain, with No. 2½ garnet paper, and finishing the sanding of the floor with the run of the wood with No. 1 paper. After the floor has been sanded, dust very carefully and apply two coats of raw linseed oil, hot. The oil should contain one-half pint of dark japan drier to every five gallons of oil and five days should be allowed before the second coat is applied.

This finish as applied to yellow pine will make a very satisfactory floor which can be readily mopped and which will not splinter. The floor will, however, become dark very gradually from the action of the cleaning water. The floor can be later oiled with a mineral oil such as is used in many schools.

The second alternative and really the most satisfactory floor finish consists of varnishing. The floor should be sanded by machines as directed above, and should then be given a light coat of dilute shellac, followed by three coats of the best hard floor finish. At least one week should be allowed between the application of the successive varnish coats. An oak floor should be given a coat of paste filler before the varnishing is begun. A varnished floor should under no conditions be treated with a mineral oil because this will cause the varnish to soften and rub away.

Supply and Exhaust Flues for Classroom Ventilation.

11. Q:—In using the Central Fan System of heating and ventilating school buildings, it is our custom and I believe the standard practice in locating both the supply and the exhaust flues in the inner or the main "breathing wall" of the various classrooms, locating the supply flue register if possible, at one end of the room, the register being some eight or nine feet above the floor line and setting the exhaust or vent register or grille at the other end of the room near the floor line. In other words, we have always believed in locating the supply and vent grilles as far apart as possible so as to avoid the short circuiting of the air and to insure as much as possible a thoro flushing of the room contents. In submitting a heating and ventilating layout designed along the above lines to the office of a state board of education, we have been advised that the above principle is wrong. This state office requesting that the supply and vent grilles or what is the same, the supply and vent flues be located *adjacent*, or *as near as possible* to each other, claiming that with such location much better results would be secured.

Would you be kind enough to give me your opinion in locating the flues and what generally is your standard practice?

Still further, would you be kind enough to let me know if you use or favor, the so-called "Unit System of Ventilating," where the outside air is taken thru wall boxes under the windows and heated by a self-contained combined fan and heating coil, the foul air finding egress thru louvres in the doors to the main corridors to which foul air flues are connected?—*M. W., New York City.*

A:—In this I entirely agree that the supply register should be at one end of the room with the bottom of the register 8′-0″ above the floor and the exhaust register at the other end as close to the floor as conditions permit. You will find diagrams, complete discussion and the reason for this given on pages 11 and 12 of my book "Mechanical Equipment of School Buildings." In rooms longer than twenty feet (or the average classroom) I would use two supply and two exhaust registers placing the two supplies 8′-0″ up near the middle of the room and an exhaust at each end at the floor; or two exhausts near the middle and a supply at each end. But never with a supply and exhaust at the middle because these would come almost directly over each other and *would tend to short circuit* the supply air dropping toward the suction of the exhaust outlet below.

If this is so in this case—and I believe most experts will admit this much—how is the same result to be prevented in a slightly smaller room where the supply and exhaust registers are relatively located in the same position?

Schools designed with registers at opposite ends of the rooms are numerous and among these the following are representative:

The million dollar Schenley High School of Pittsburgh, Pa.; the half million dollar Montclair High School of Montclair, N. J.; the Battin High School of Elizabeth, N. J.; the Bridgeport High School of Bridgeport, Conn.; the Bailey High School of Pittsburgh, Pa.; the East Orange High School of East Orange, N. J.; the Watt School of Pittsburgh, Pa.; and many others.

In regard to the "Unit System," I have never favored this except in preference to natural ventilation. This is for the reason that it possesses the following disadvantages:

(a) Impossible to clean air of dust and dirt.

(b) Impossible to humidify the air.

(c) Places the control of the room temperature and air supply entirely in the hands of the individual teacher—a thing that has been proven time and again as impractical if even temperatures and given air changes are to be maintained.

(d) The system involves carrying large quantities of steam (to supply these units) to every room in the building causing an enlarging and multiplying of steam pipes where—as one architect expresses it—"Those heating fellows are making a boiler shop out of the building" anyway.

(e) Air supply for classrooms must be taken from numerous and varied points on the outside of the building some of which will be, perforce, located close to the ground and in more or less undesirable locations. With a fan system utilizing one large intake it can usually be arranged to secure *all* the air from some good location and to properly clean and humidify it before presenting it to the pupils for breathing purposes.—*Harold L. Alt, M. E., Brooklyn, N. Y.*

Library Books.

15. Q:—It is the intention of this board to procure for each room in all of our ward schools, a small library possibly to the value of $25 for each room. We will thank you to give us any information which you have in hand.—*B. F. R., Texas.*

A:—This problem is strictly professional and should be solved by the superintendent of schools with the co-operation of the principals and grade teachers. Carefully graded lists of books are available from the Texas State Department and from other sources to which the superintendent has ready access, and with which he must be familiar. The correspondent may reasonably expect the superintendent to work out complete lists, prices, etc., during the summer months so that the scretary need only place the orders with the publishers. Any suggestions on lists which we might make would be an infringement on the superintendent's plain duty.—*W. C. B.*

A:—There is comparatively little technical data

Schoolroom Seating and Sizes.

16. Q:—Have you any book giving the data on school seating, schoolroom sizes, etc.? If so, please let me know how much it costs.—*J. B. D.*

A: There is comparatively little technical data on schoolroom seating in the American literature of school hygiene. The most accurate figures on the height of school children with specific application to the standard sizes of school desks are to be found in the pamphlet "The Solution of the Schoolroom Seating Problem," by C. L. Sampson, principal of the Humboldt School, St. Louis, Mo. The pamphlet is to be had free from the American Seating Co., Chicago, Ill.

Standard schoolroom sizes may be found in any of the following books:

American School Building Standards, by Wilbur T. Mills. Franklin Educational Publishing Co., Columbus, O.

American Schoolhouses, by Fletcher B. Dresslar. U. S. Bureau of Education. Bulletin 1910, No. 5. Free on request.

School Architecture, by Wm. Geo. Bruce. The Bruce Publishing Co., Milwaukee, Wis.

A study of actual plans such as you can find in the files of the leading architectural magazines will be helpful. The following books are valuable for this purpose:

Modern American School Buildings, Parts I and II. American Architect Book Department, New York City.

Grade School Buildings and High School Buildings. Compiled by Wm. C. Bruce. The Bruce Publishing Co., Milwaukee, Wis.

A Fair Guess.

Said the teacher to Johnnie, "What is half of one-third?"
And John, unaccustomed to such
Vague things and obscure, said, "I don't know for sure,
But it can't be so awfully much."

—Woman's Home Companion.

No Novelty.

Teacher—Why were you not at school yesterday?

Tommy—It was my birthday.

Teacher—But I don't stay home from school on my birthday.

Tommy—Well, I guess you've got used to 'em.

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The names given below are those of the leading and most reliable Producers of School Goods in the United States. Under our guarantee none other can receive a place in this Directory. Everything required in or about a schoolhouse may be secured promptly by ordering from these firms or their jobbers.

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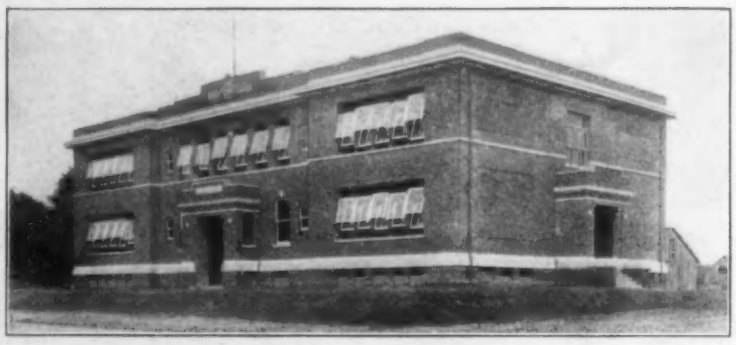

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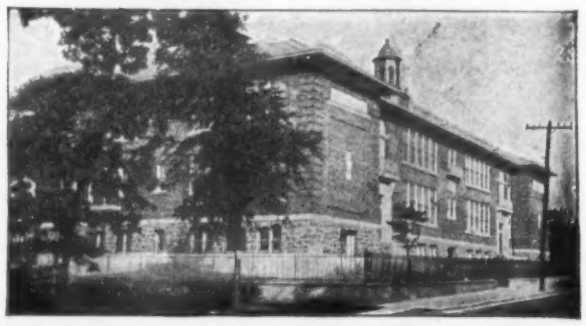

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